

Fig. 1

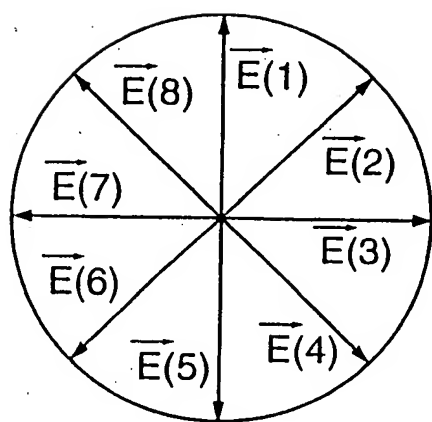


Fig. 1A

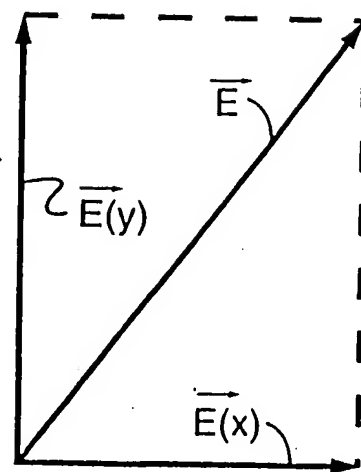


Fig. 1B

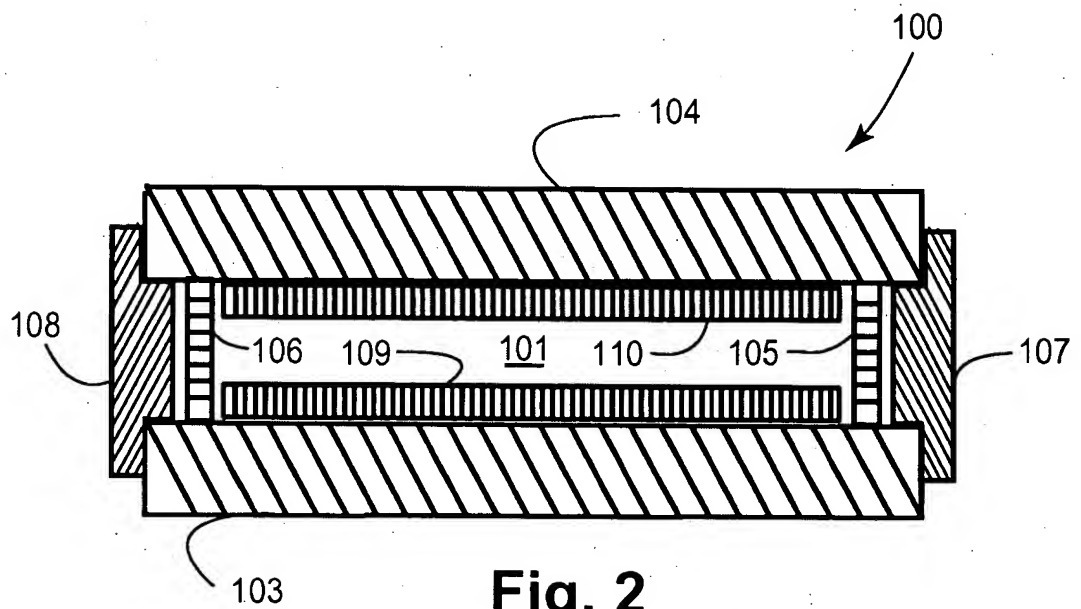


Fig. 2
(Prior Art)

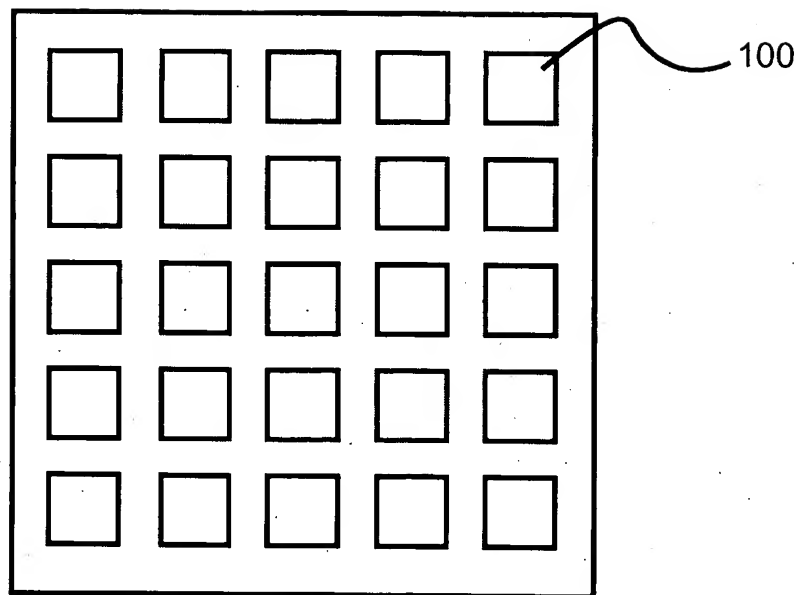


Fig. 2A

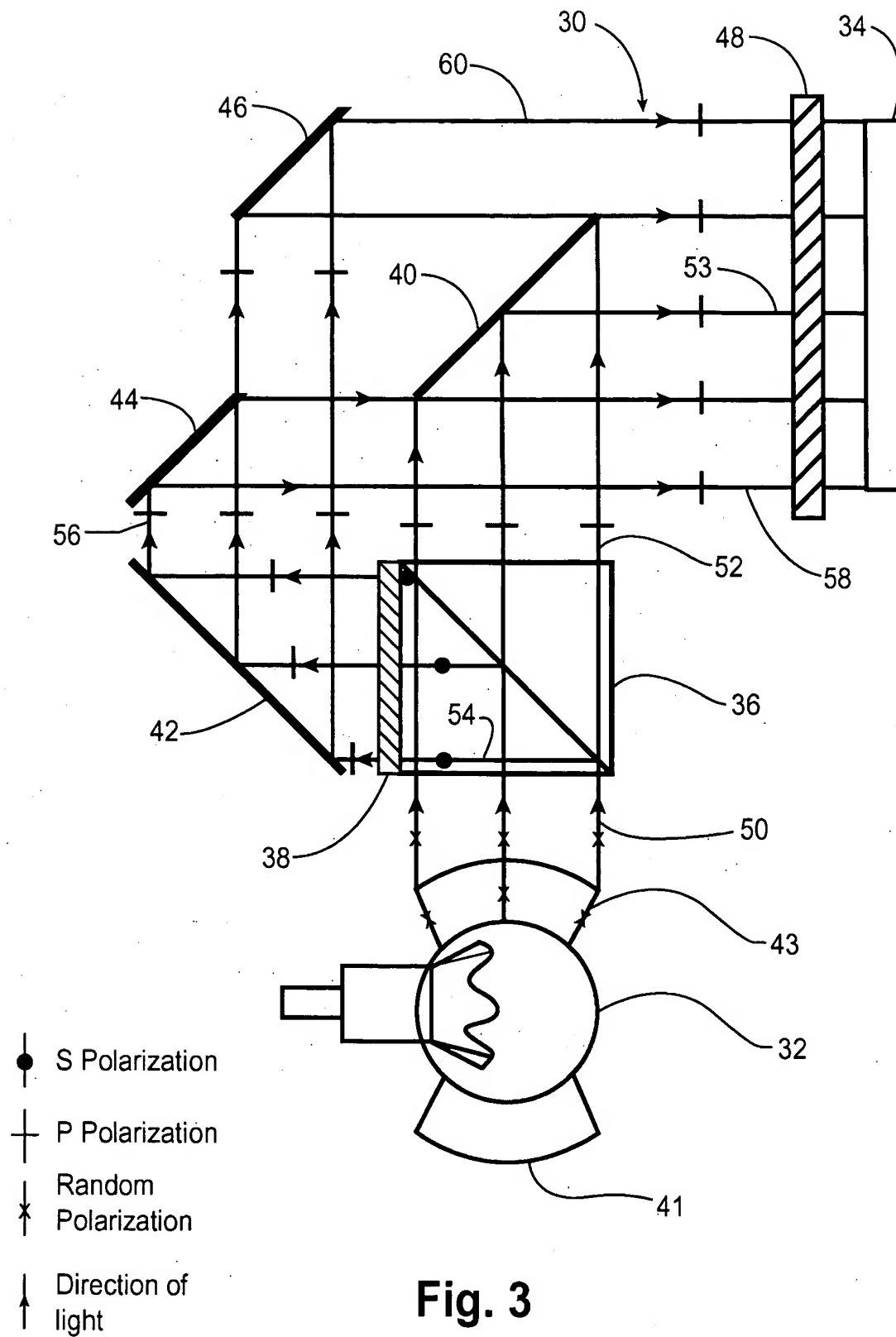


Fig. 3

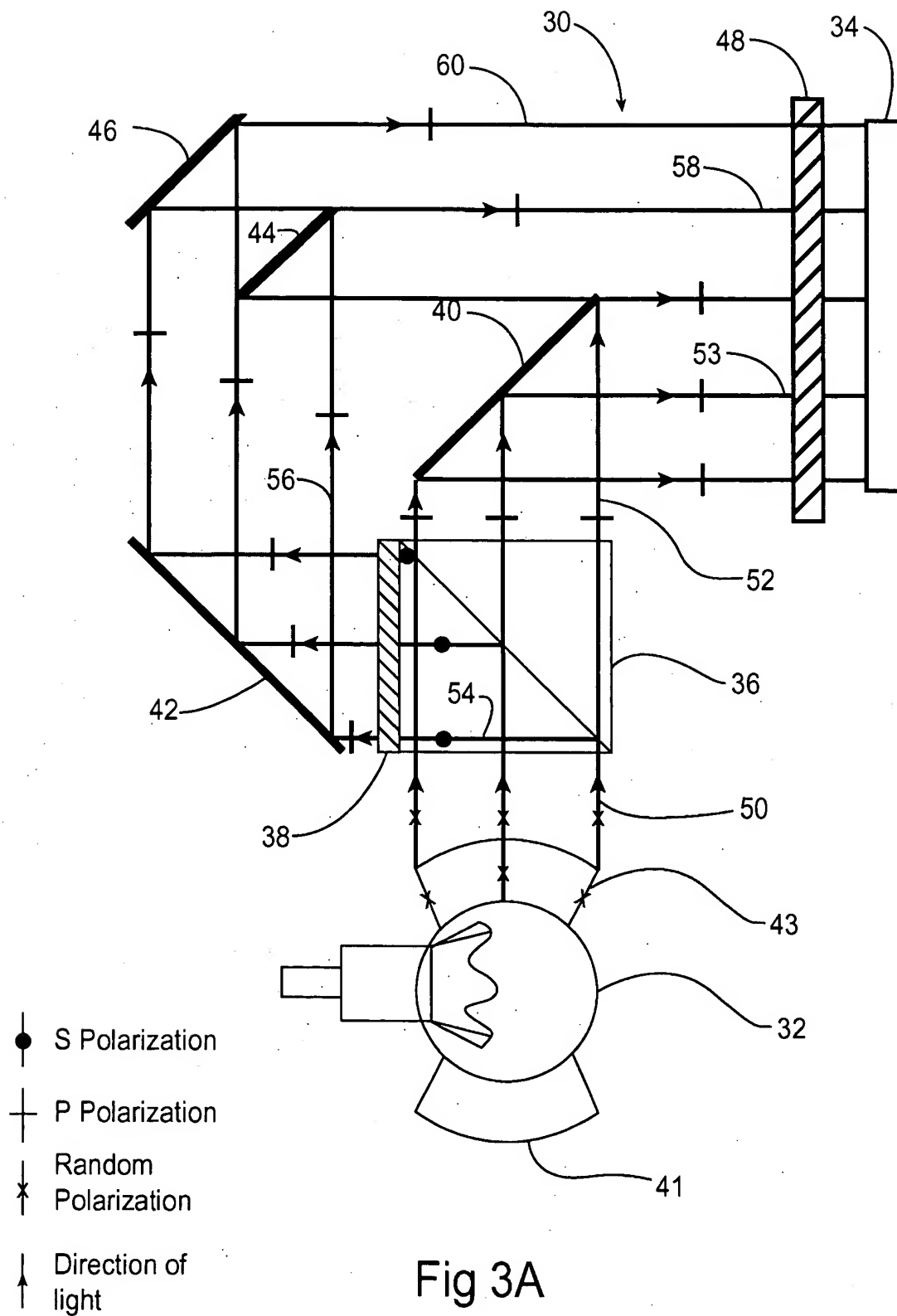


Fig 3A

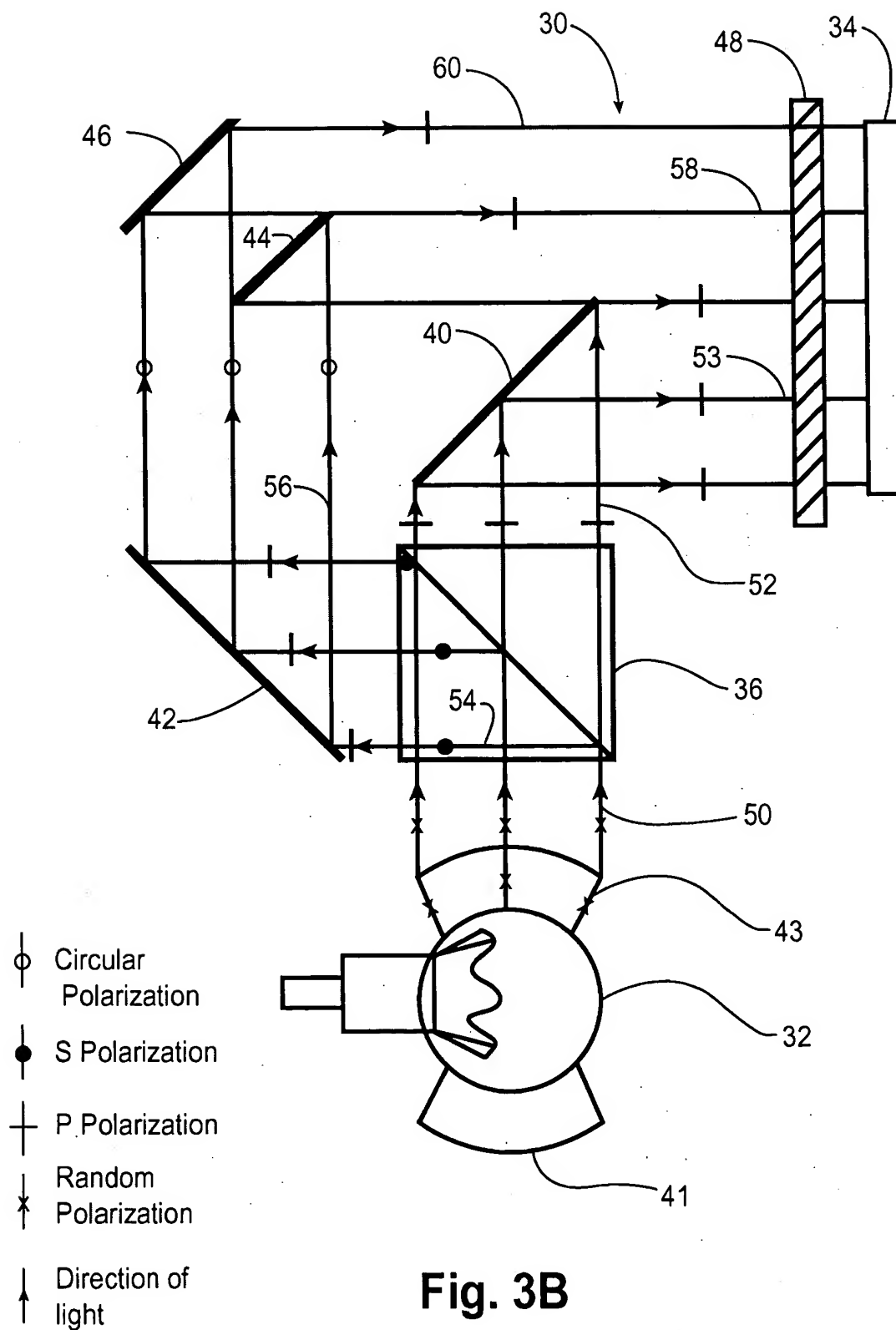


Fig. 3B

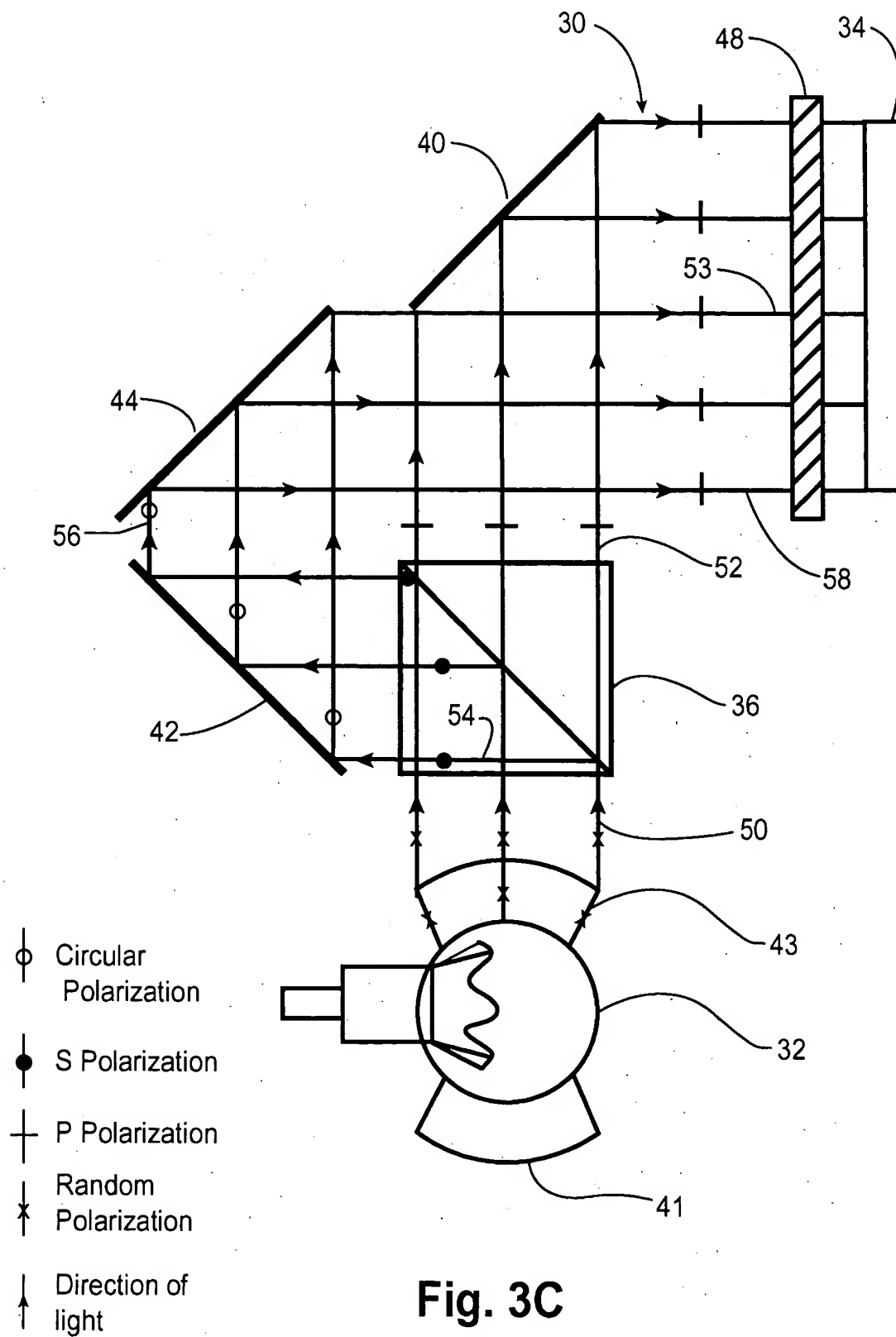


Fig. 3C

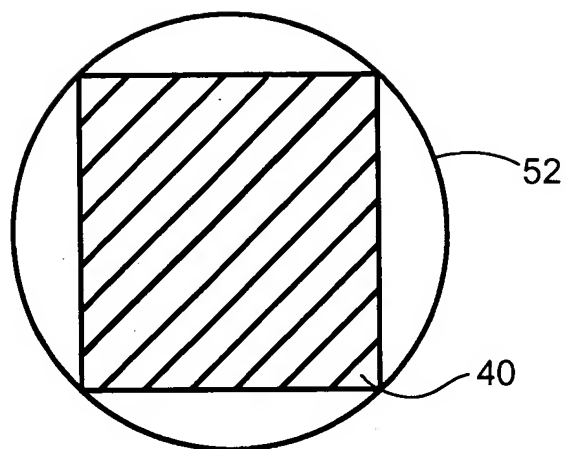


Fig. 4

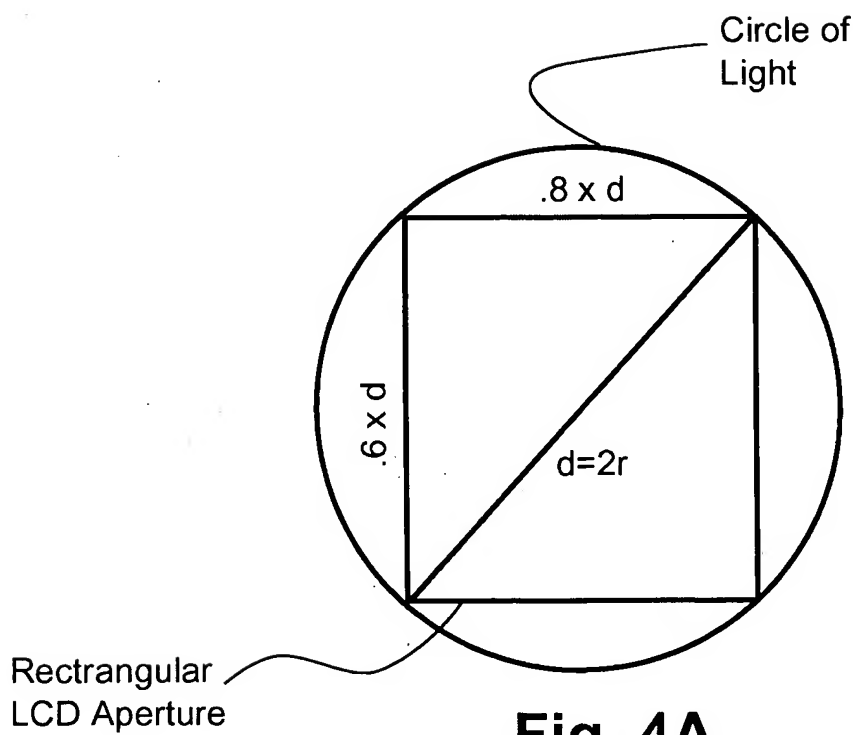


Fig. 4A

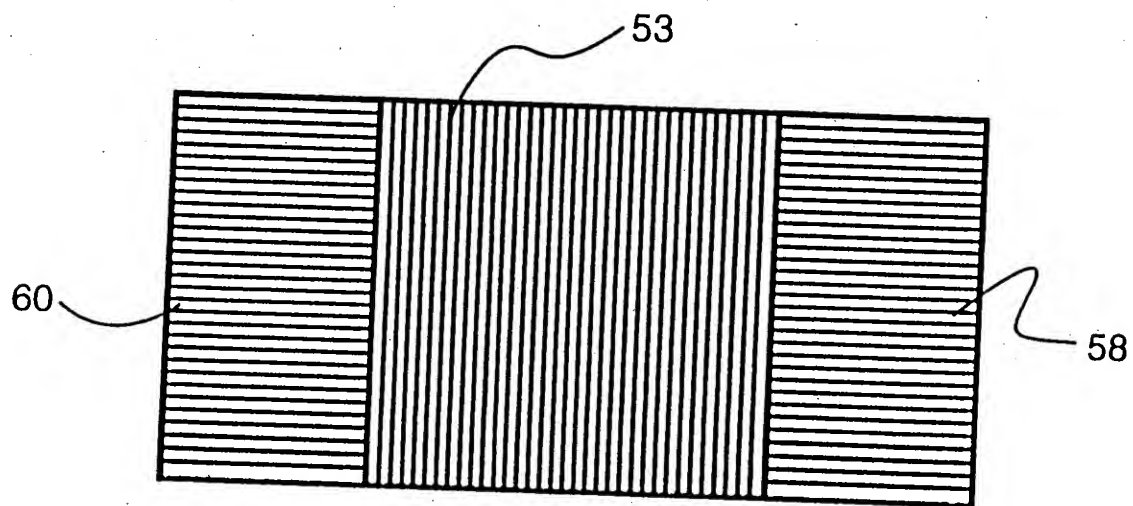


Fig. 5

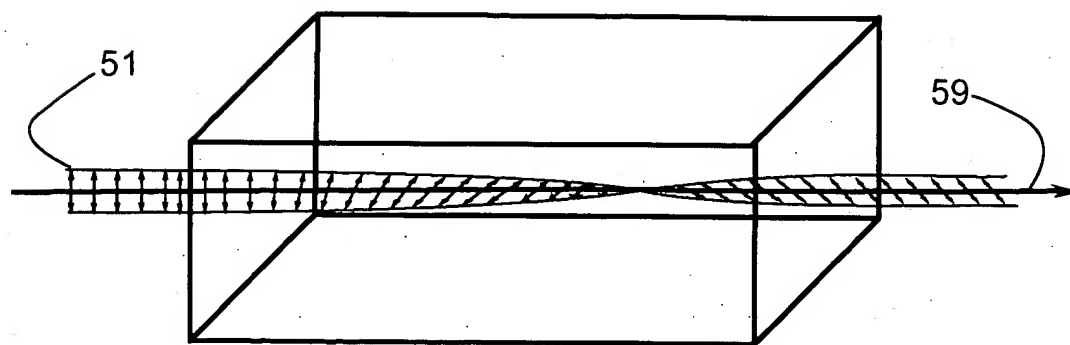
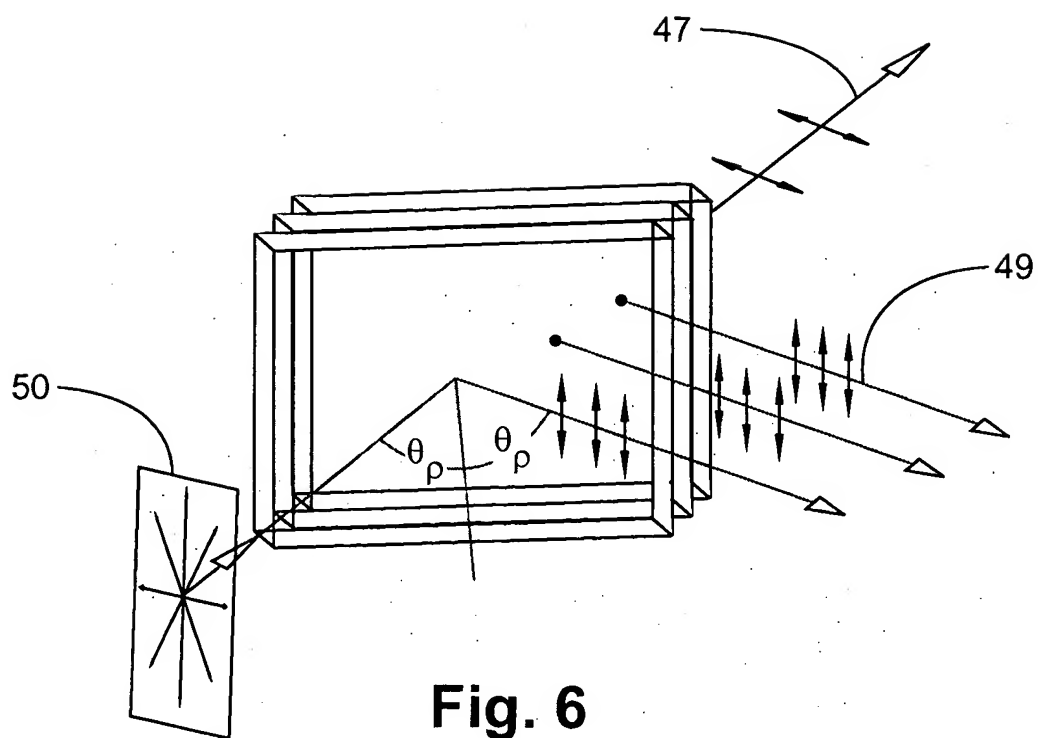


Fig. 7

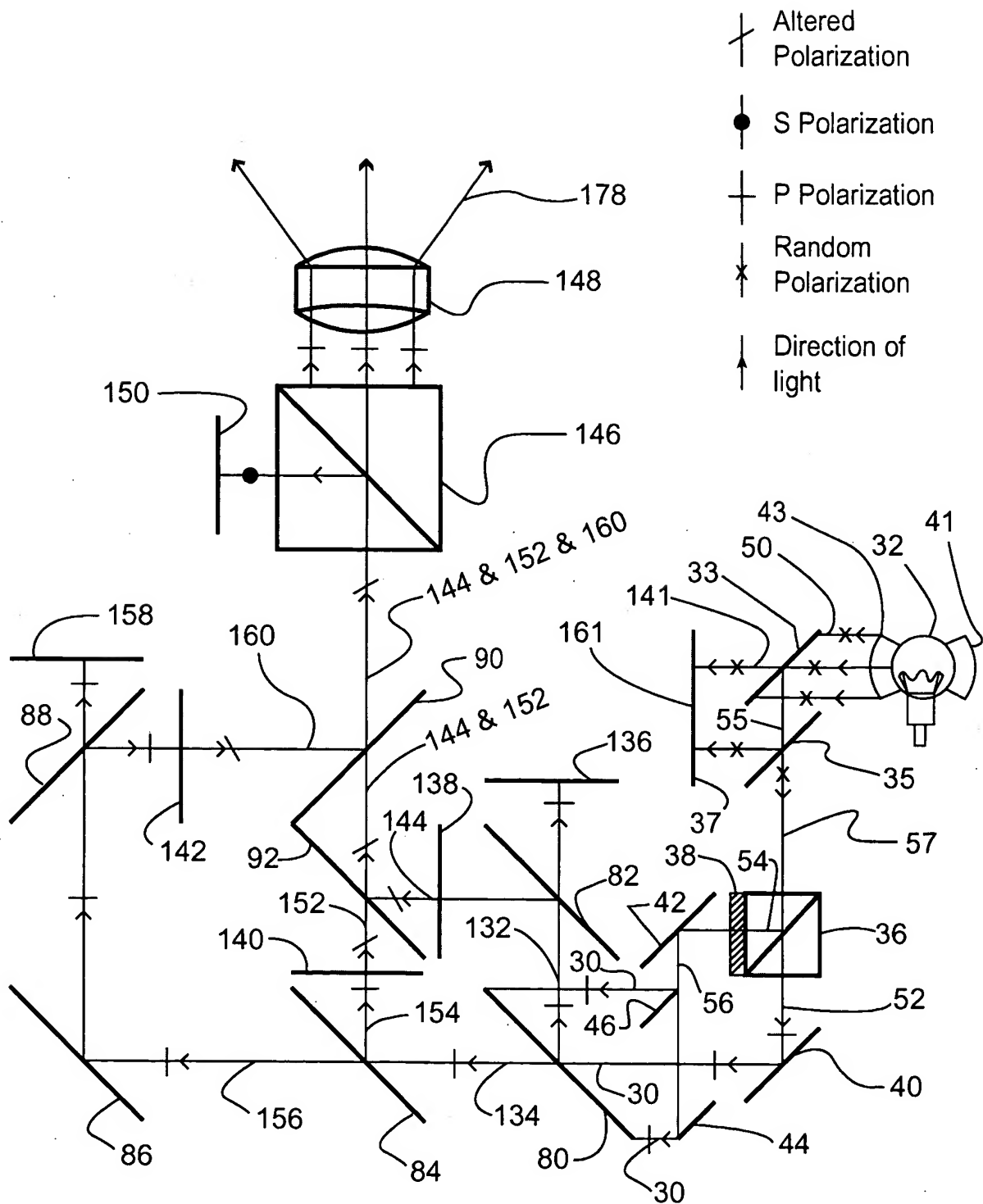


Fig. 8

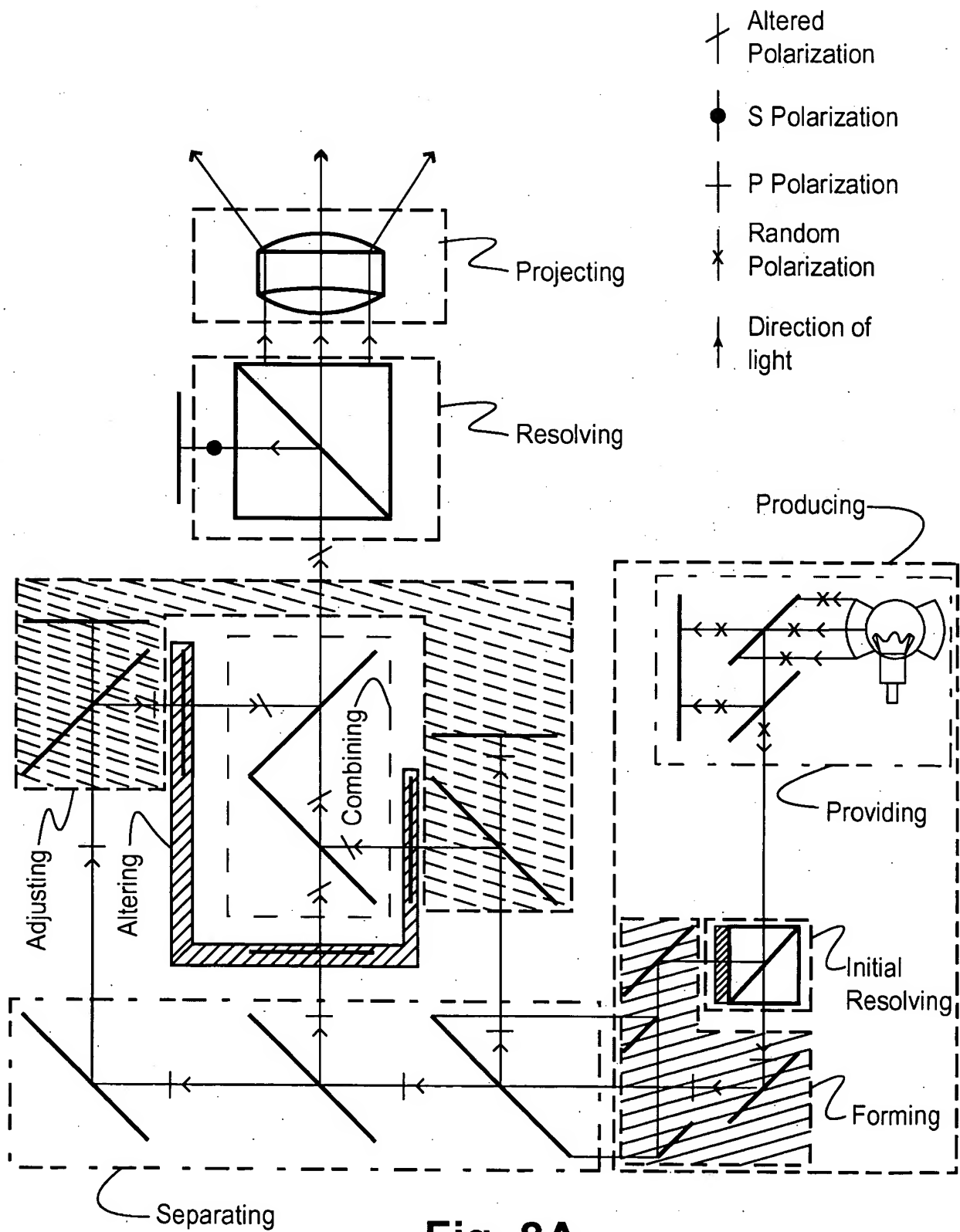


Fig. 8A

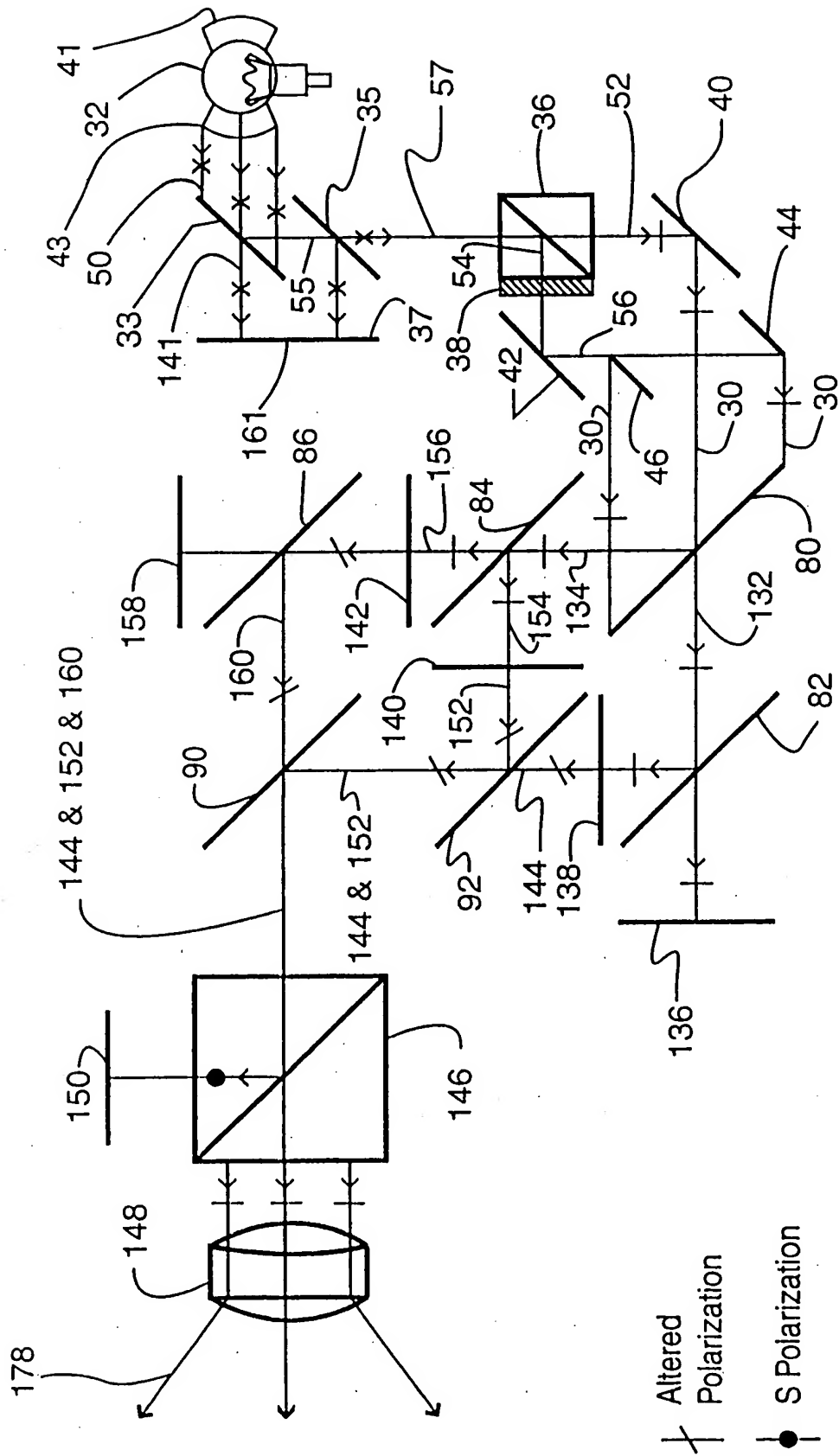
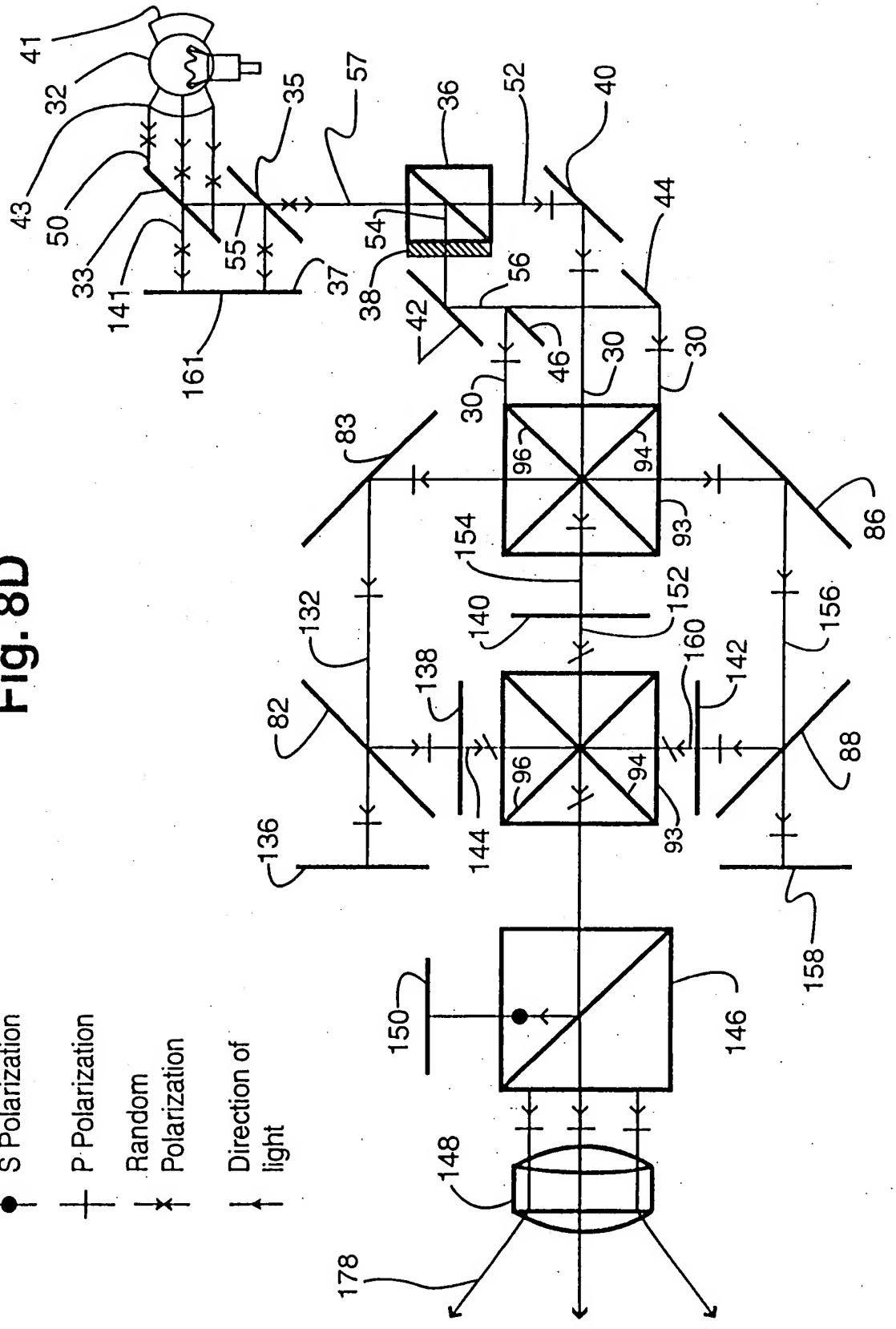


Fig. 8C

- Altered Polarization
- S Polarization
- P Polarization
- Random Polarization
- Direction of light

Fig. 8D



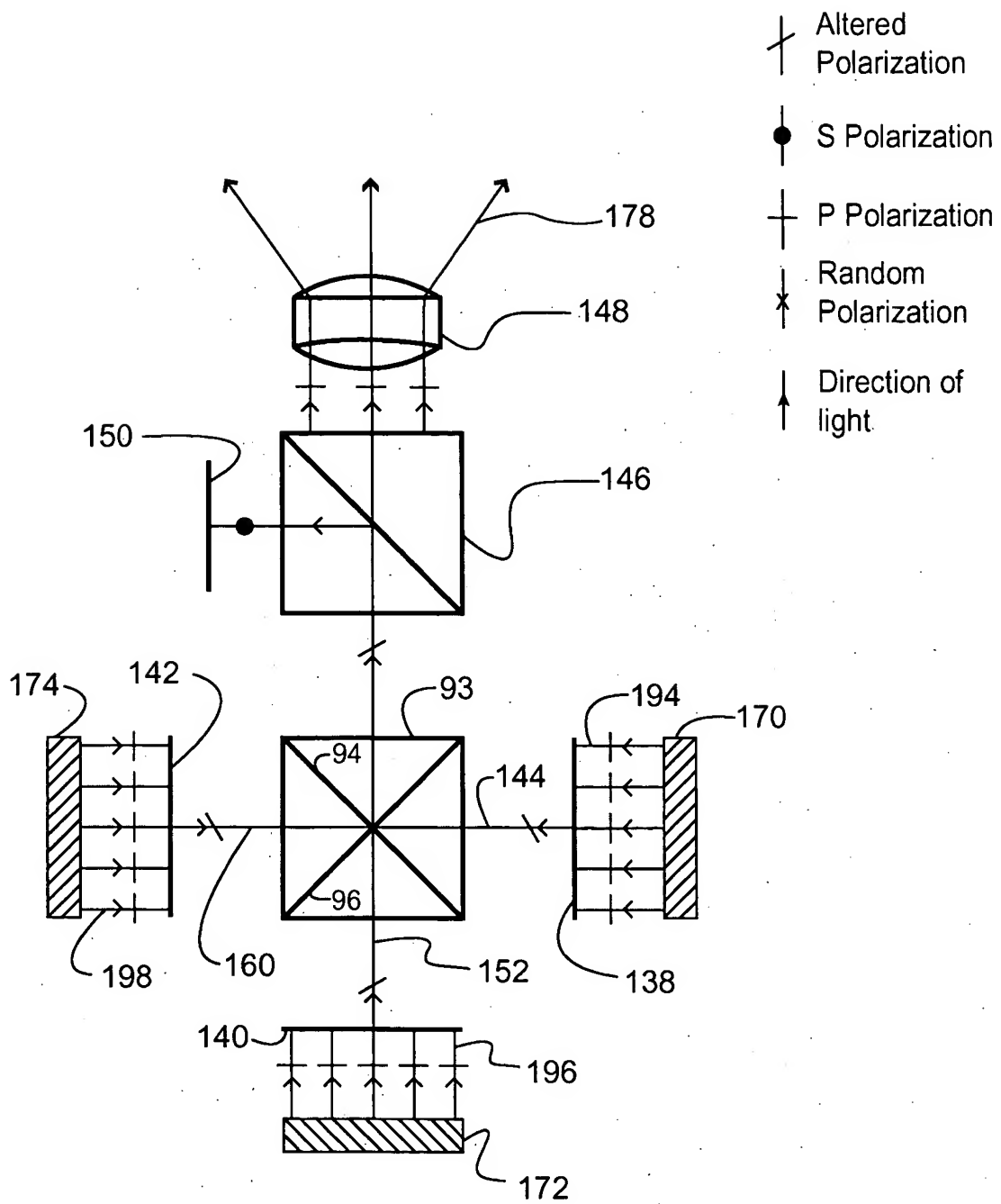


Fig. 8E

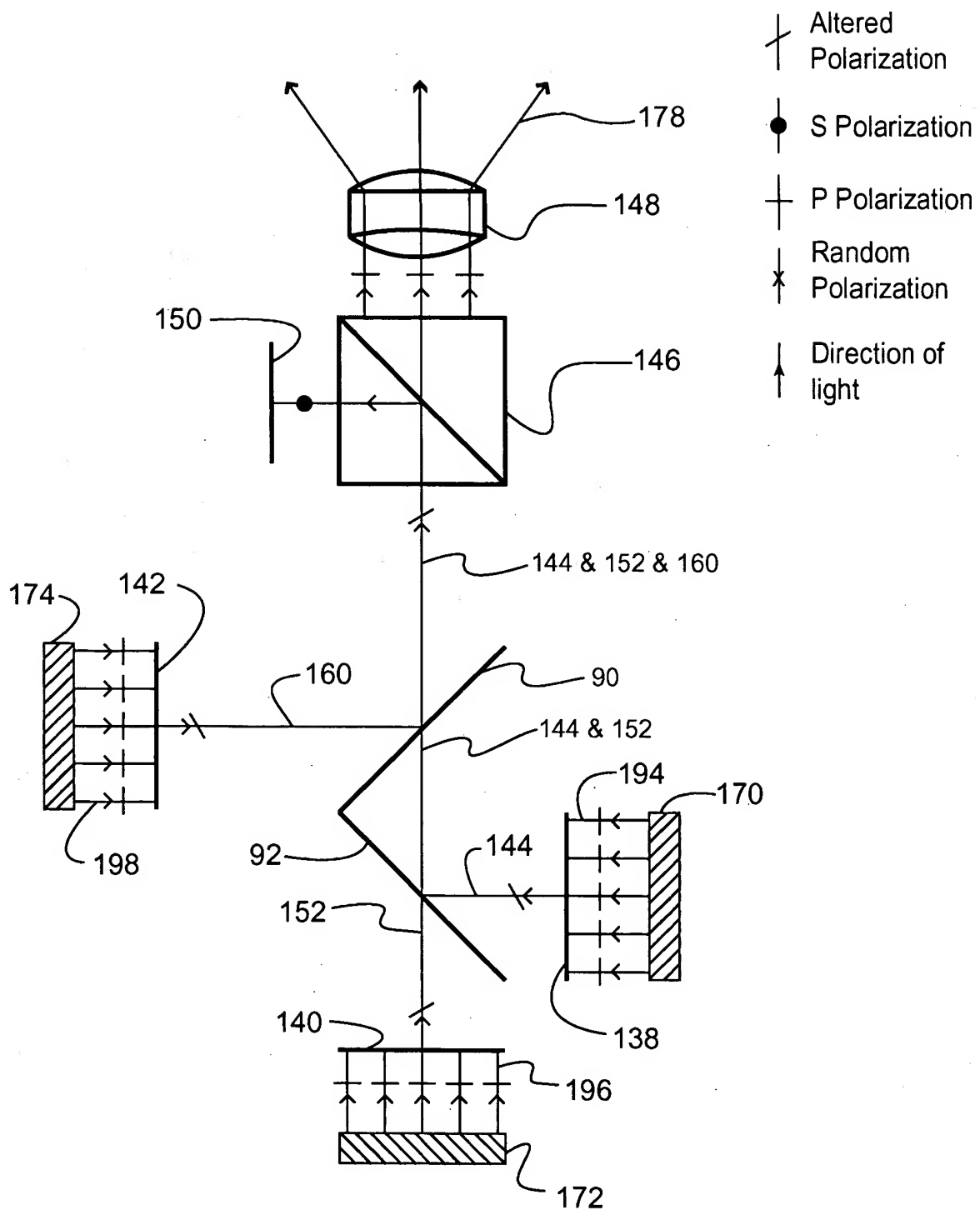


Fig. 8F

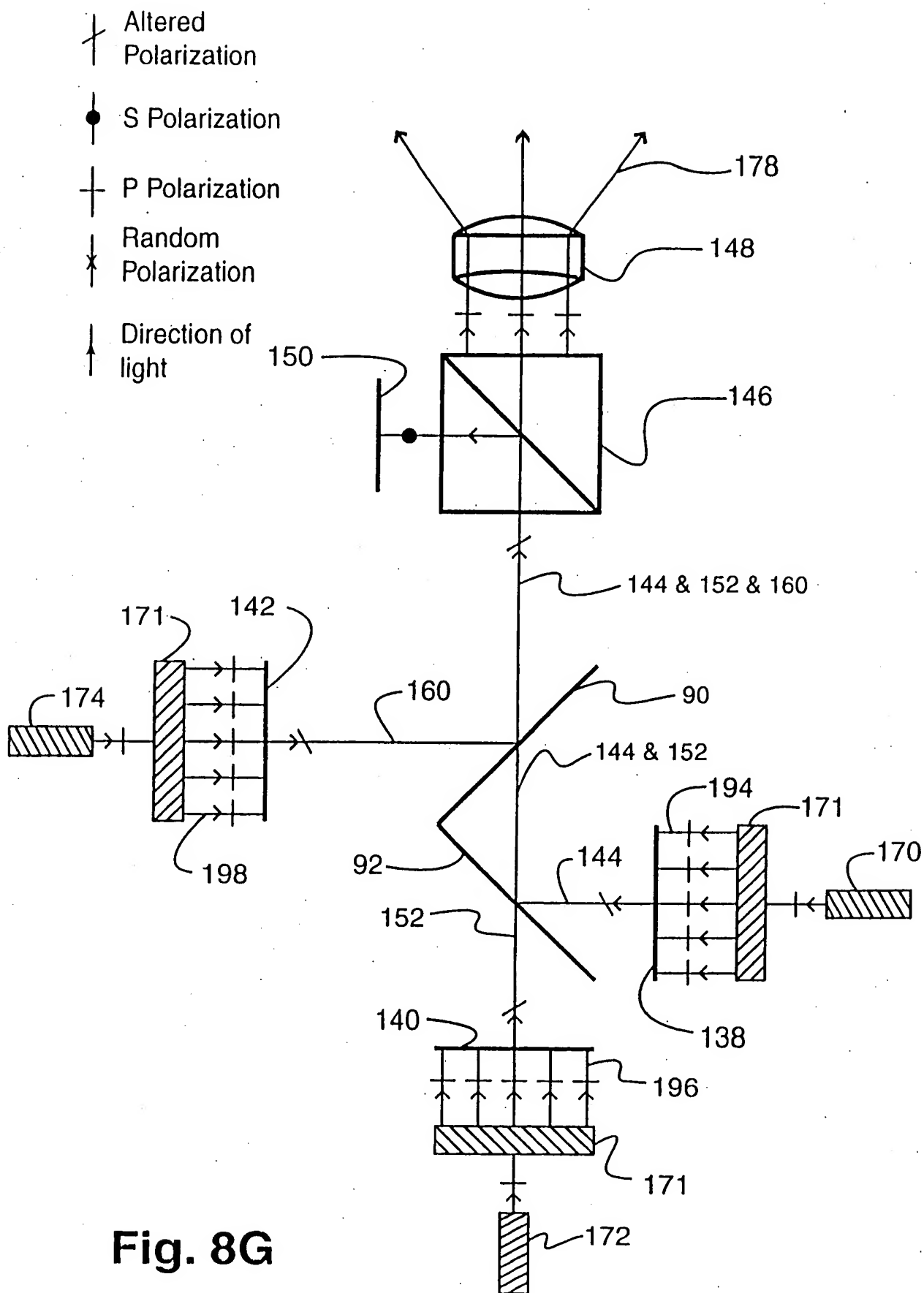


Fig. 8G

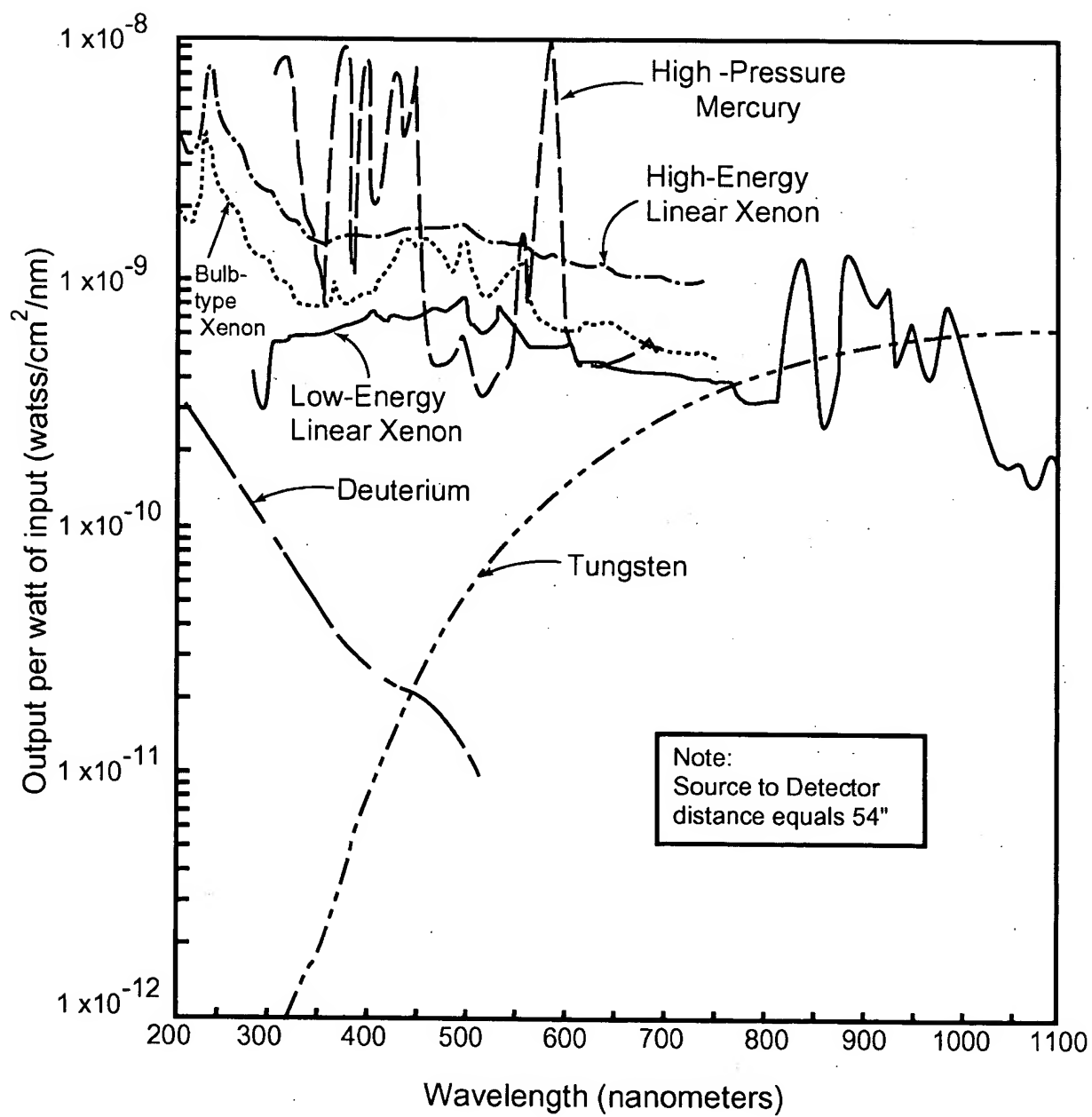


Fig. 9

SOURCE TYPE	LUMENS / WATT (1 PW)	APPARENT COLOR TEMP (°K)	SOURCE SIZE OR TYPE	AVERAGE LUMINANCE (cd/mm ²)
NATURAL (observed from earth)				
Sun	—	5900K	—	1600
Moon	—	—	—	0.0025
Clear Sky	—	12,000 to 25,000K	—	0.008
Overcast Sky	—	6500K	—	0.002
Lightning Flash	—	—	—	8x10 ⁴
COMBUSTION				
Candle flame	—	2000K	5x5mm	0.01
Kerosene Flame	—	—	8x8mm	0.012
Natural Gas Flame	—	—	12x12mm	0.004
Acetylene Flame	—	—	4x4mm	0.11
Photoflash Lamp	—	3800K	varies	160 to 400
NUCLEAR				
Atomic Fission Bomb	—	—	30 dia	2x10 ⁶
Self-Luminous Points	—	—	—	2 or 3x10 ⁻⁷
CARBON ARC				
Flame Flame	18	3800K	5x5mm	180
High Intensity	22	5500-6500K	8x8mm	500 to 1500
ENCLOSED ARC				
Compact high Pressure				
Mercury (100W)	20	8000K	0.25x0.2mm	1700
Mercury (200W)	50	7000K	0.6x2.2mm	400
Mercury-Xenon (1000W)	50	6000K	1.5x4.2mm	350
Xenon(150W)	19	6000K	0.5x1.9mm	180
Xenon(1600W)	37.5	6000K	1.4x4.0mm	800
Xenon(20,000W)	57	6000K	3x11mm	4800
Metal Halide				
HMI(1200W)	92	5600K	2.5x13mm	120
CSI (1000W)	80	4200K	5x9mm	80
CID (1000W)	62	5500K	5x9mm	65
MARC 300	45	5000K	1x3mm	400
Zirconium	2.5	3200K	1.5mm dia	46
Argon	17	7000K	3x10mm	1400
High Intensity Discharge (HID)				
Clear Mercury (400W)	52	6000K	20x68mm	1.5
Metal Halide (400W)	85	4500K	20x40mm	4.2
High Pressure Sodium (400W)	125	2100K	8.8x87mm	6.5
Low Pressure Fluorescent (cool white)				
430 ma	80	4300K	T12 Bulb	0.008
800 ma	82	4300K	T12 Bulb	0.011
1500 ma	70	4300K	T12 Bulb	0.017
Sodium	150	1700K	—	.1
ELECTROLUMINESCENT				
Green @ 60 Hertz Green	—	—	—	3x10 ⁻⁵
Green @ 400 Hertz Green	—	—	—	7x10 ⁻⁵
INCANDESCENT				
Carbon Filament	3	2000K	C6 or C8	0.5
Tantalum filament	6	2200K	C6 or C8	0.7
Tungsten Filament				
Vacuum Lamp	10	2600K	C6 or C8	2.0
Gas Filled Lamps	20	3000K	CC6 or CC8	12
(includes tungsten halogen lamps)	26	3200K	CC6 or CC8	24
	33	4300K	CC6 or CC8	36

Fig. 9A

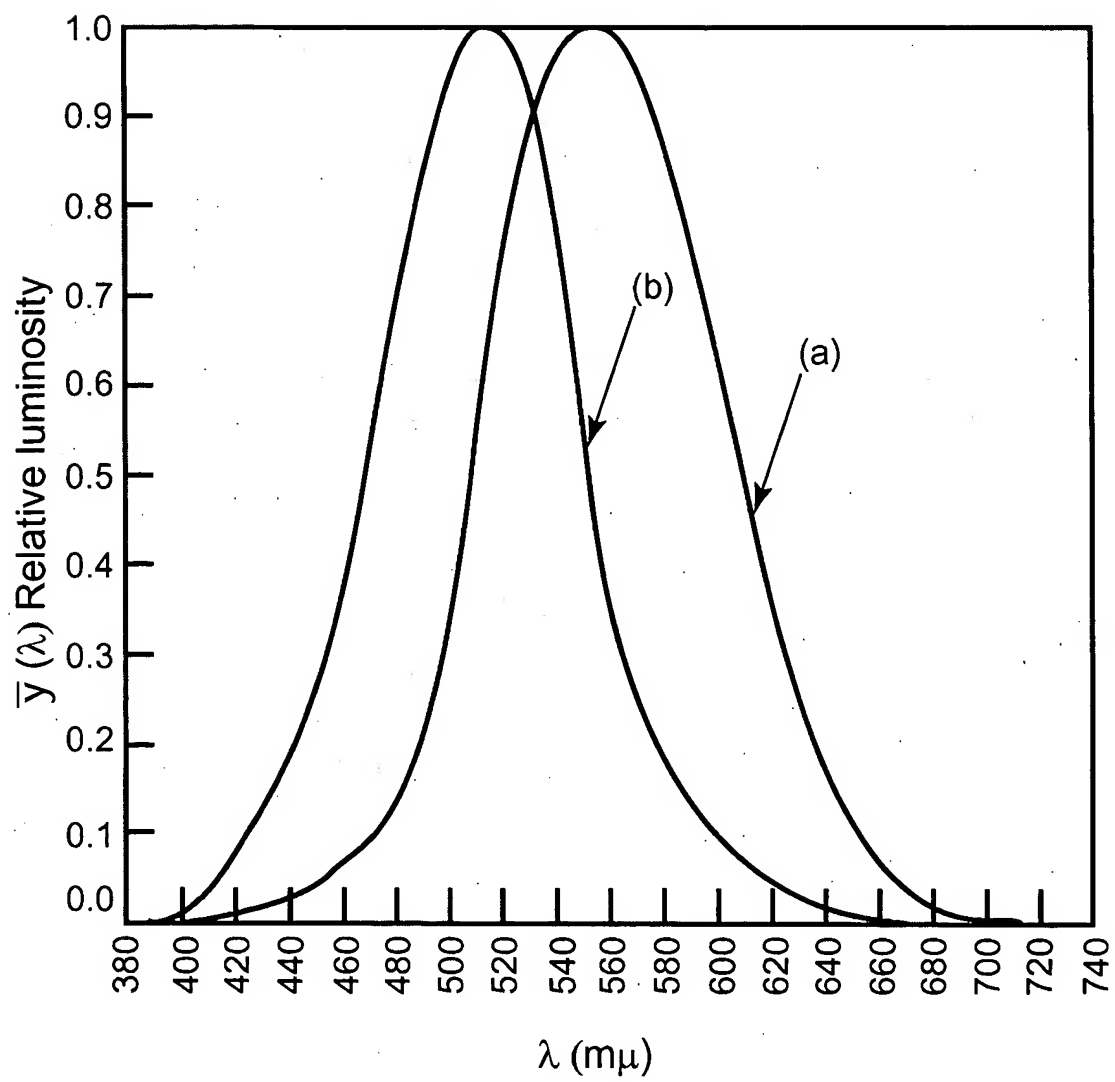


Fig. 10

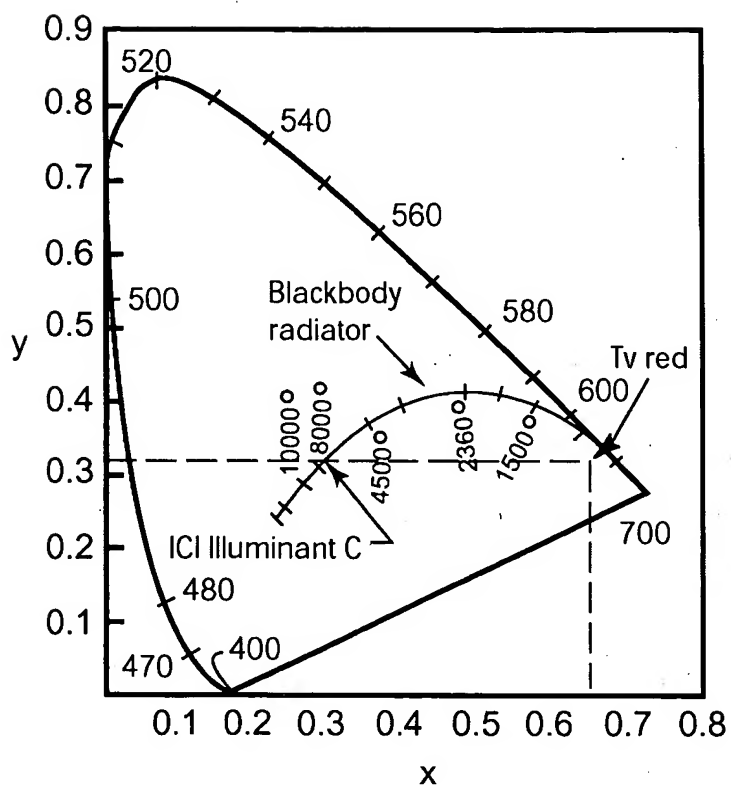


Fig. 10A

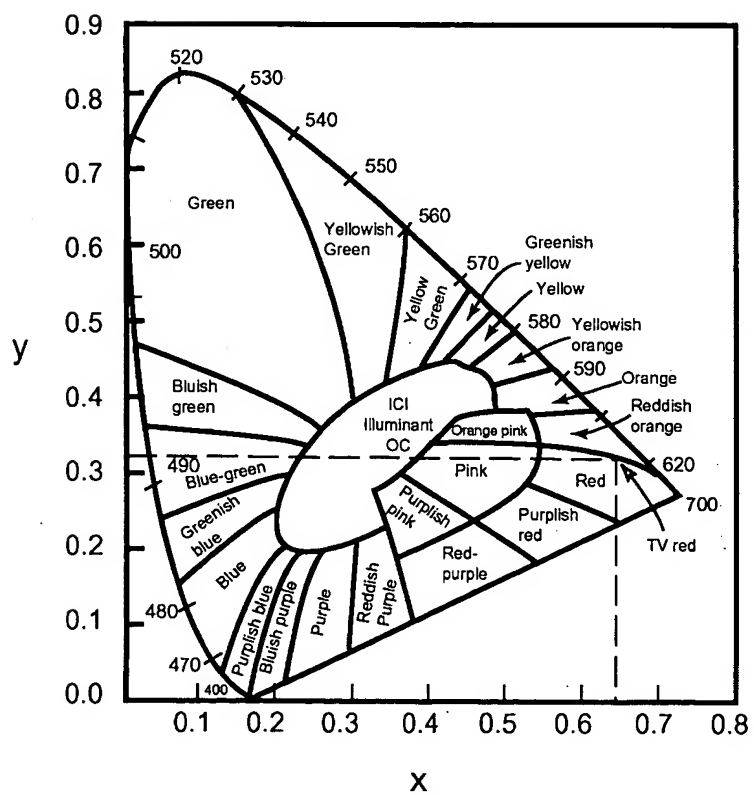


Fig. 10B

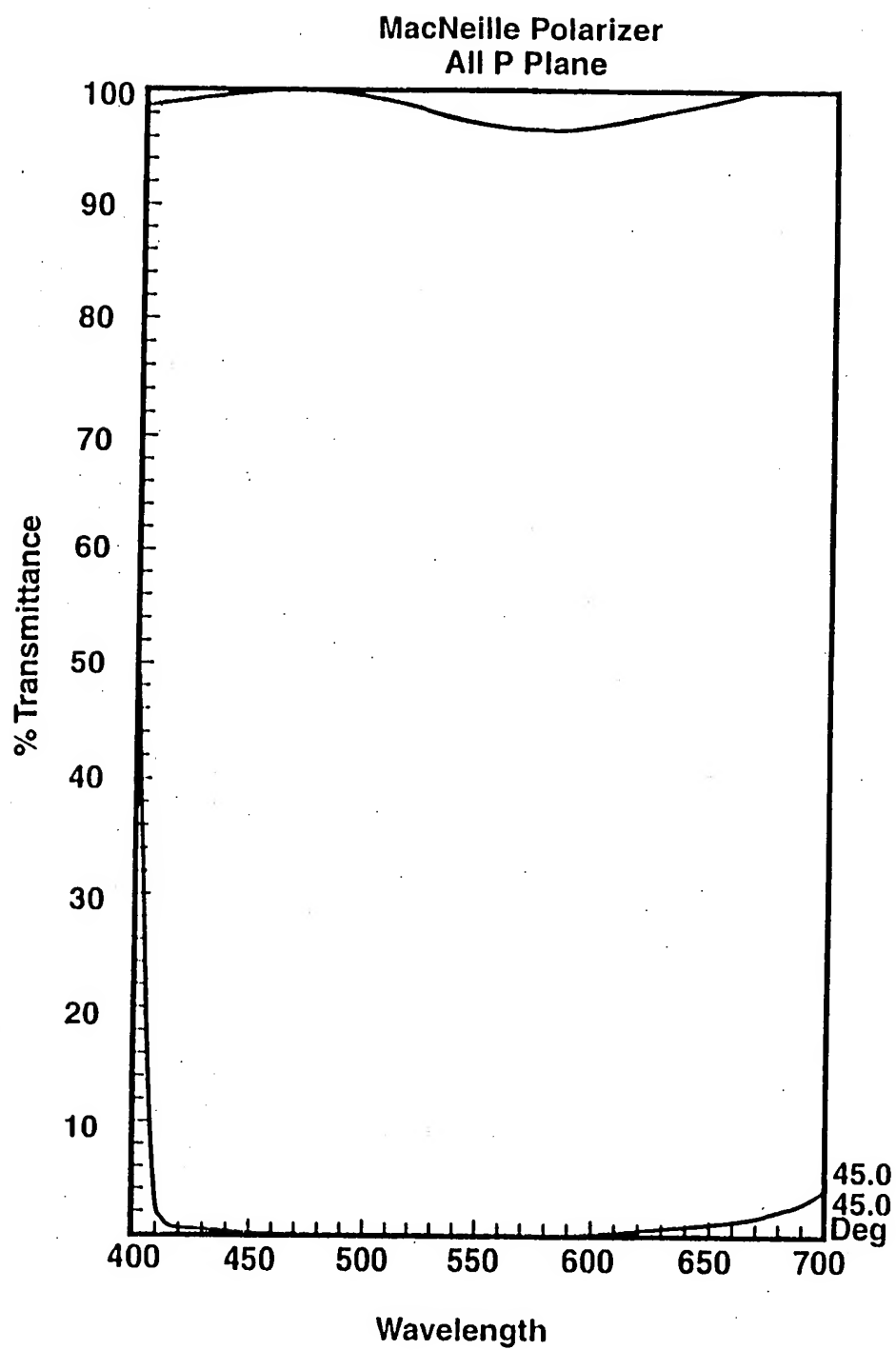


Fig. 11

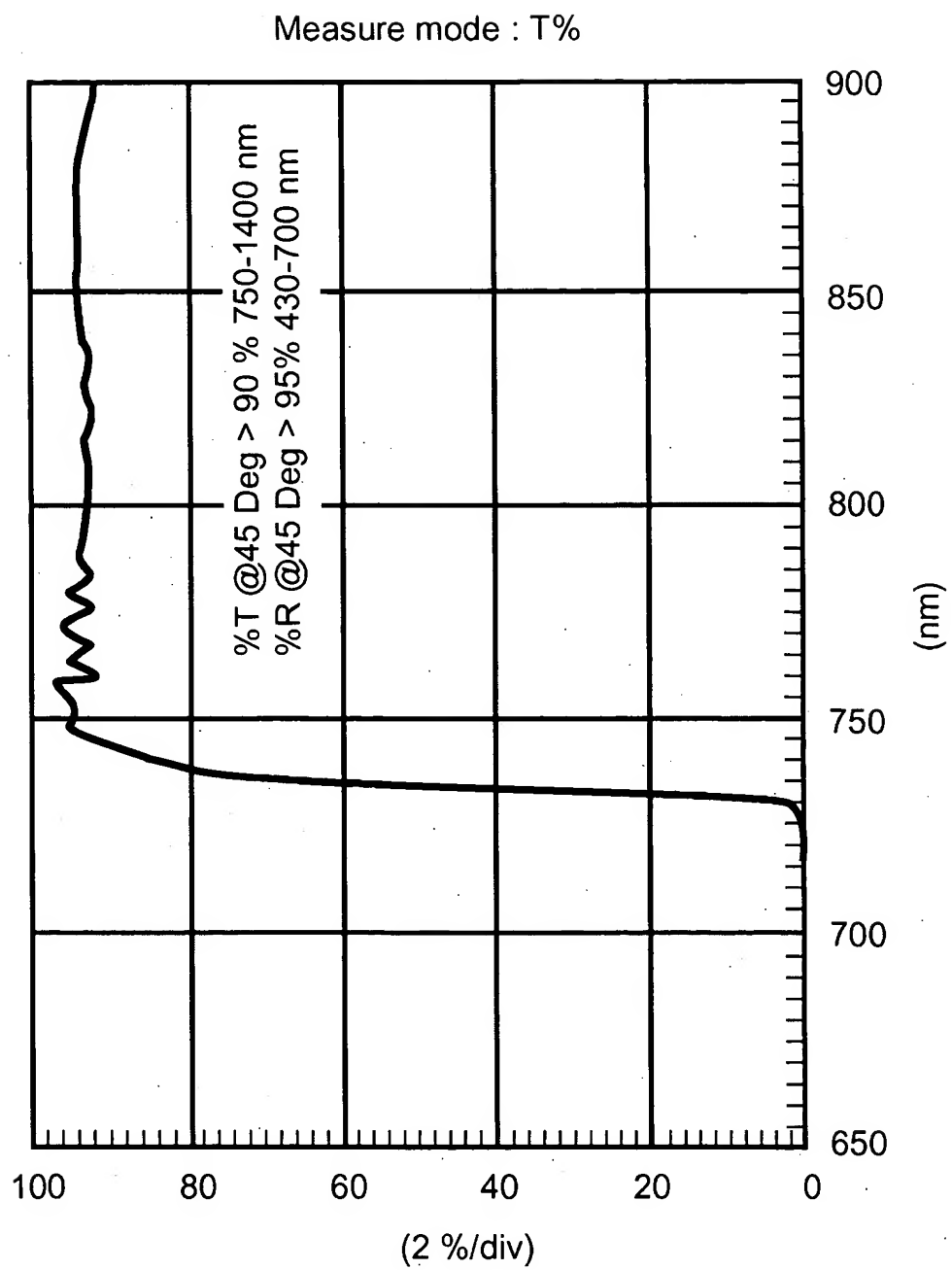


Fig. 12

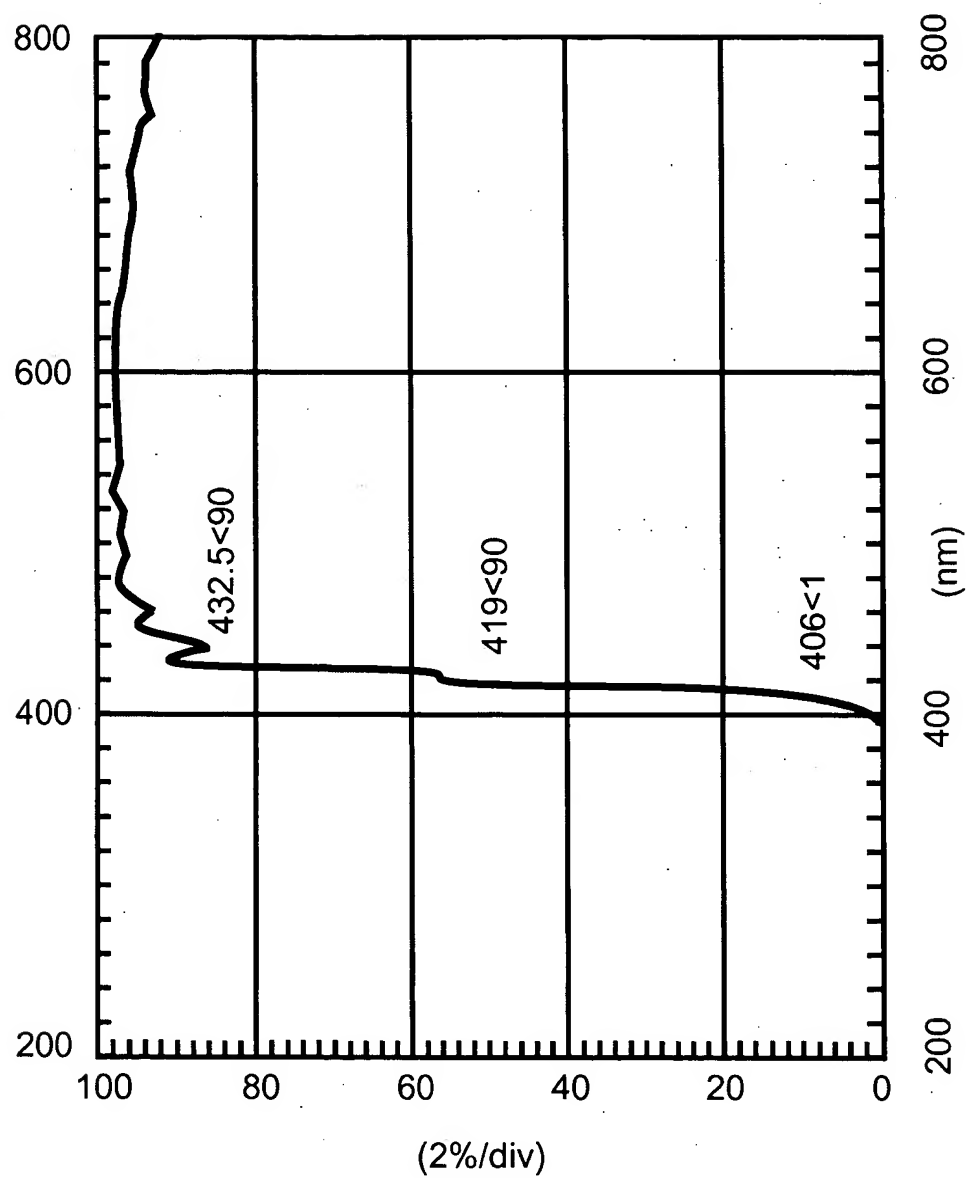


Fig. 13

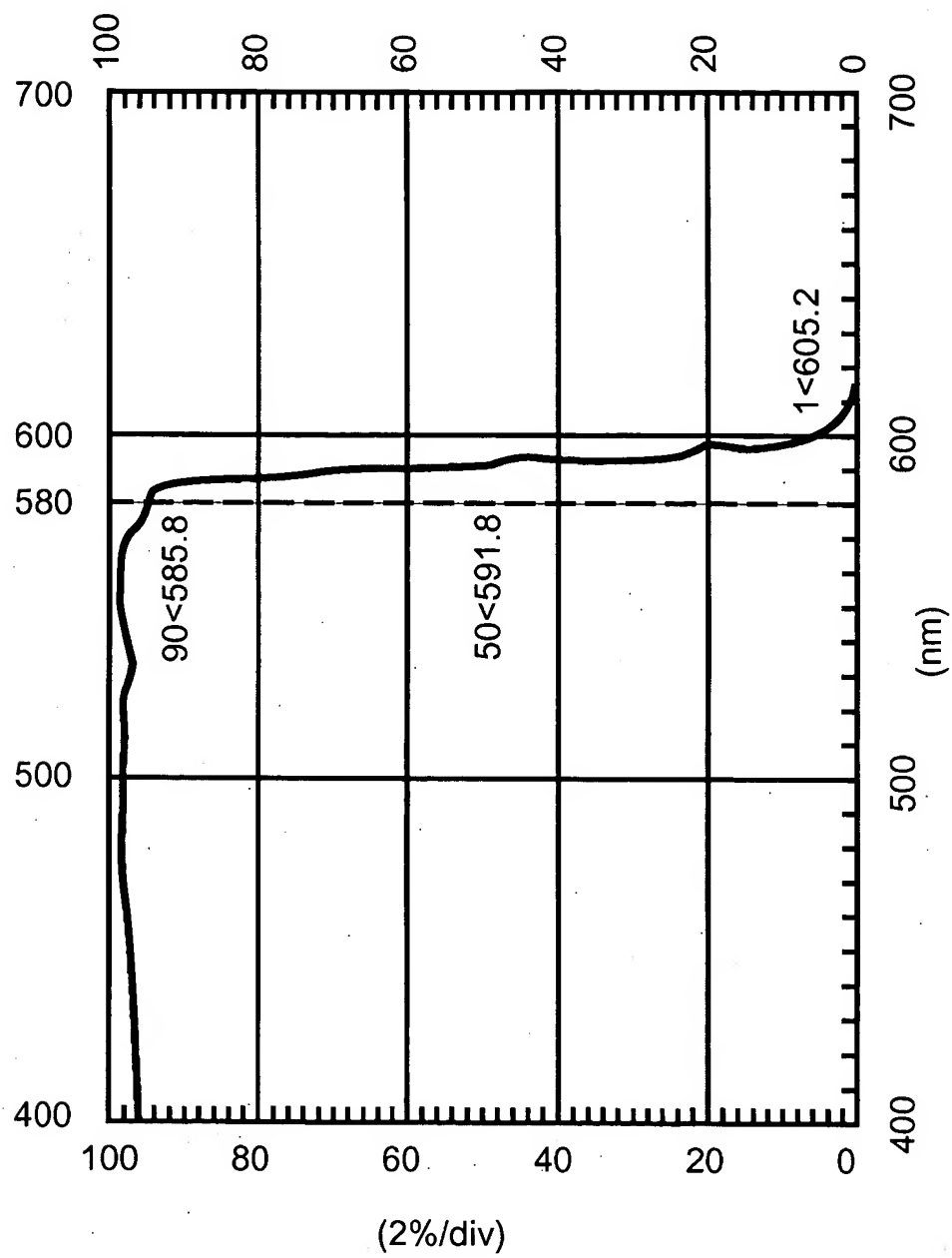


Fig. 14

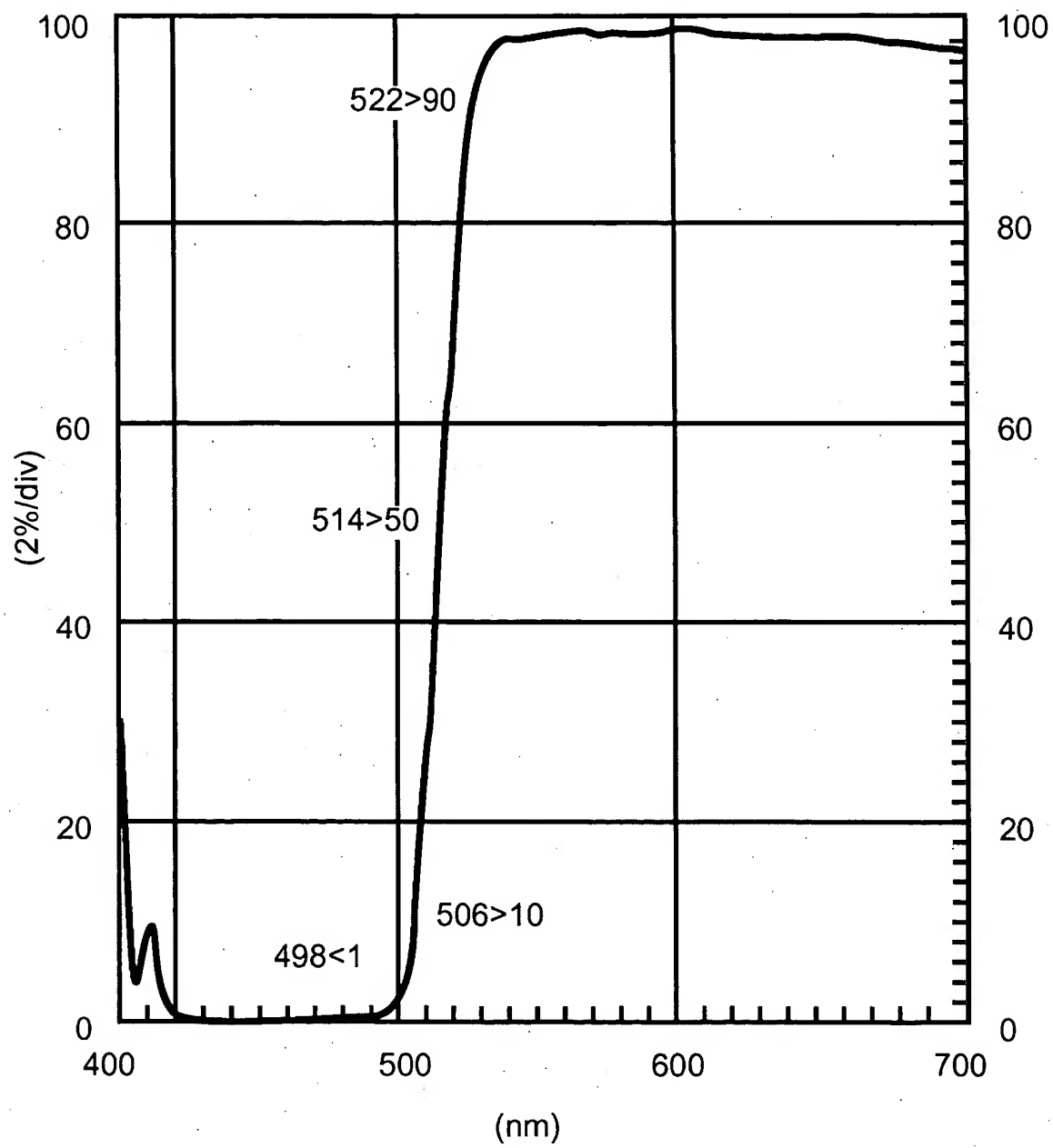


Fig. 15

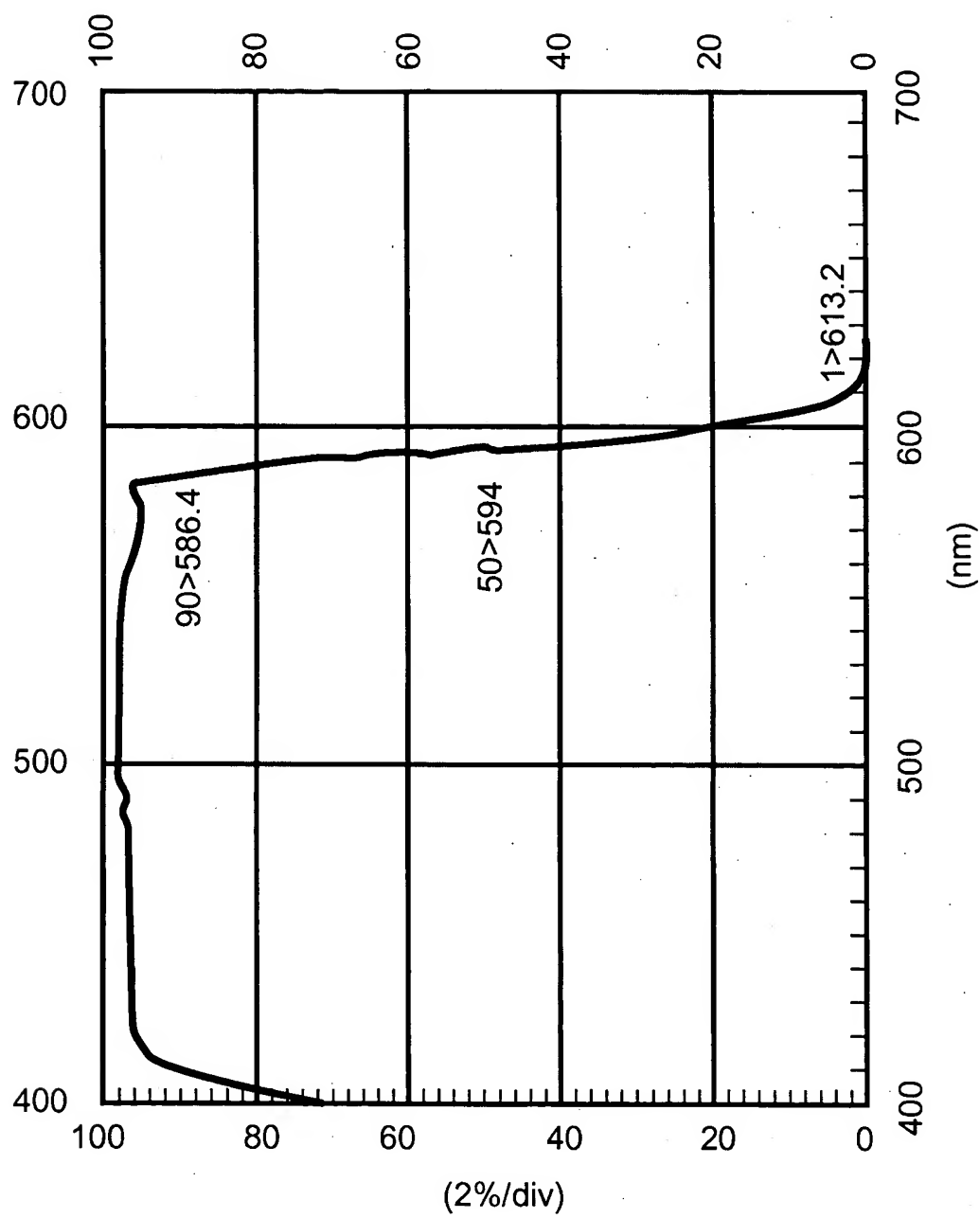


Fig. 16

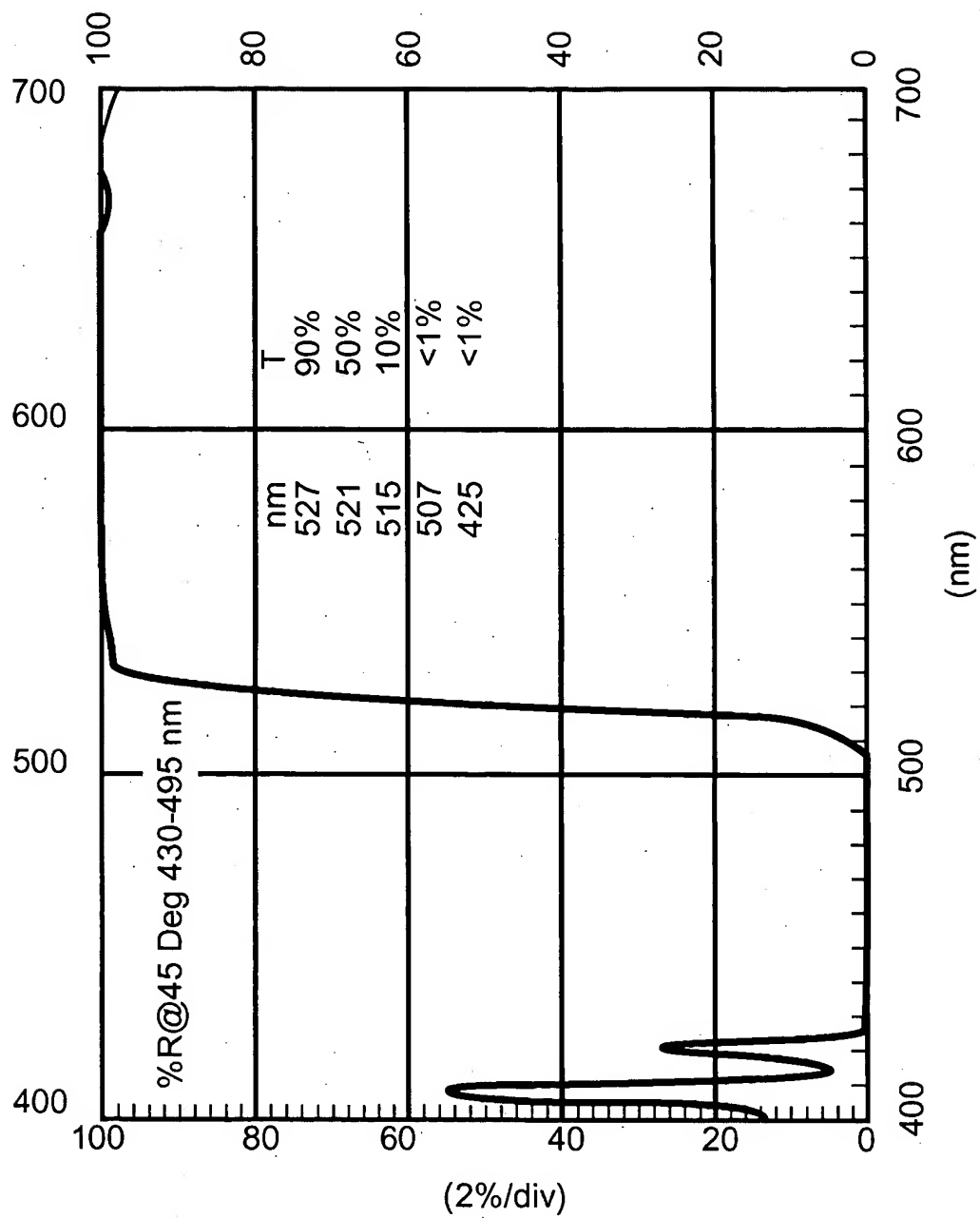


Fig. 17

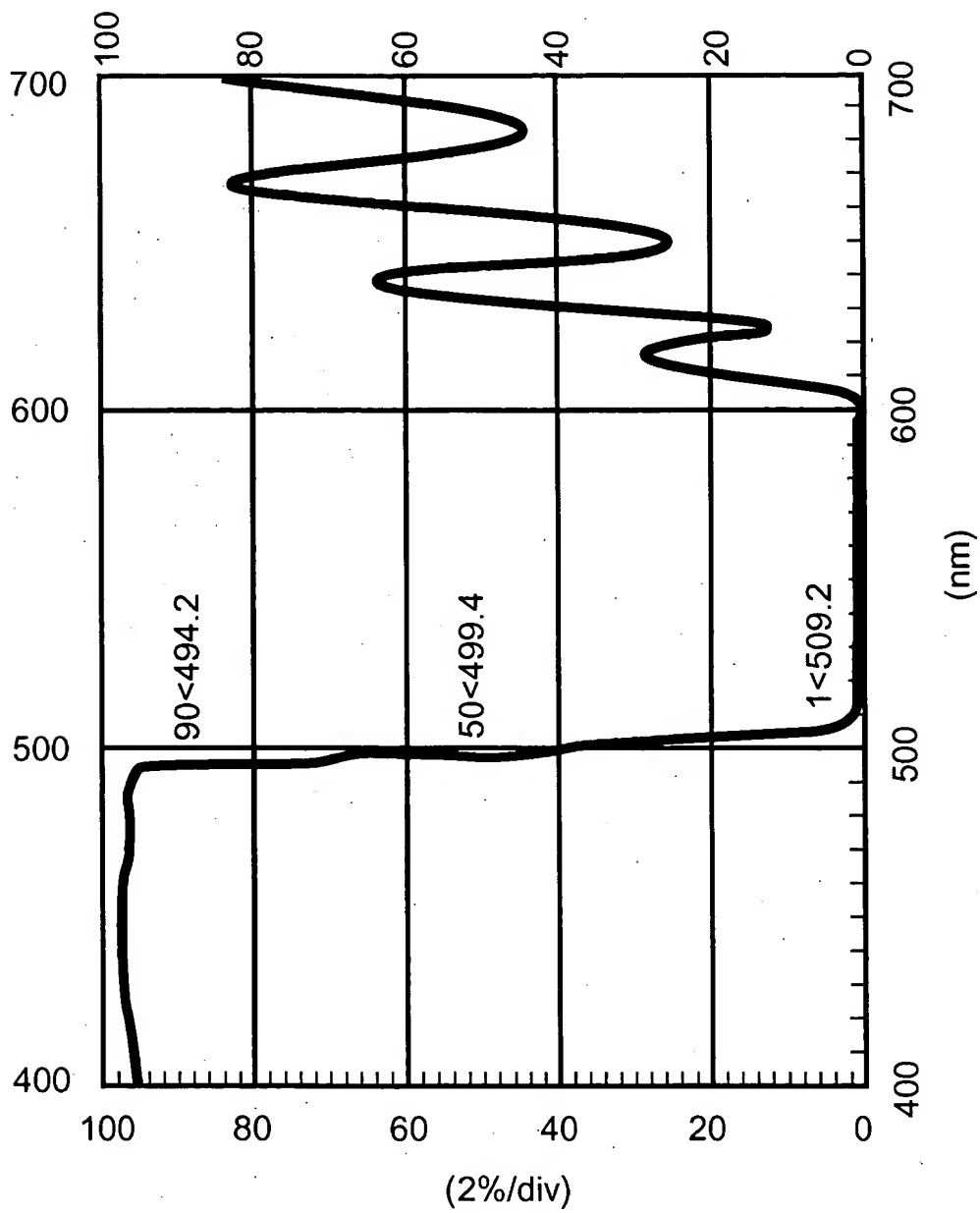


Fig. 18

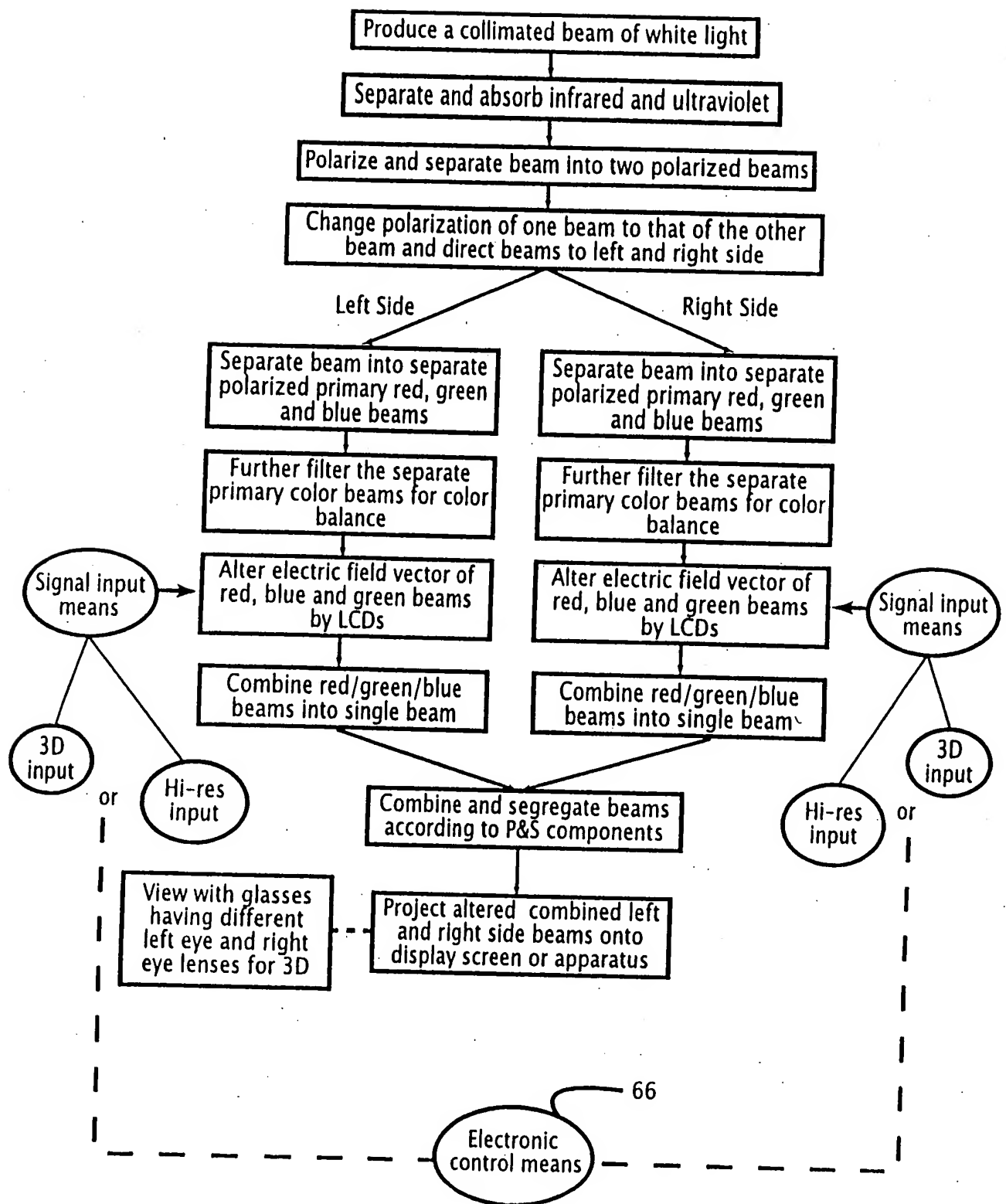


Fig. 19

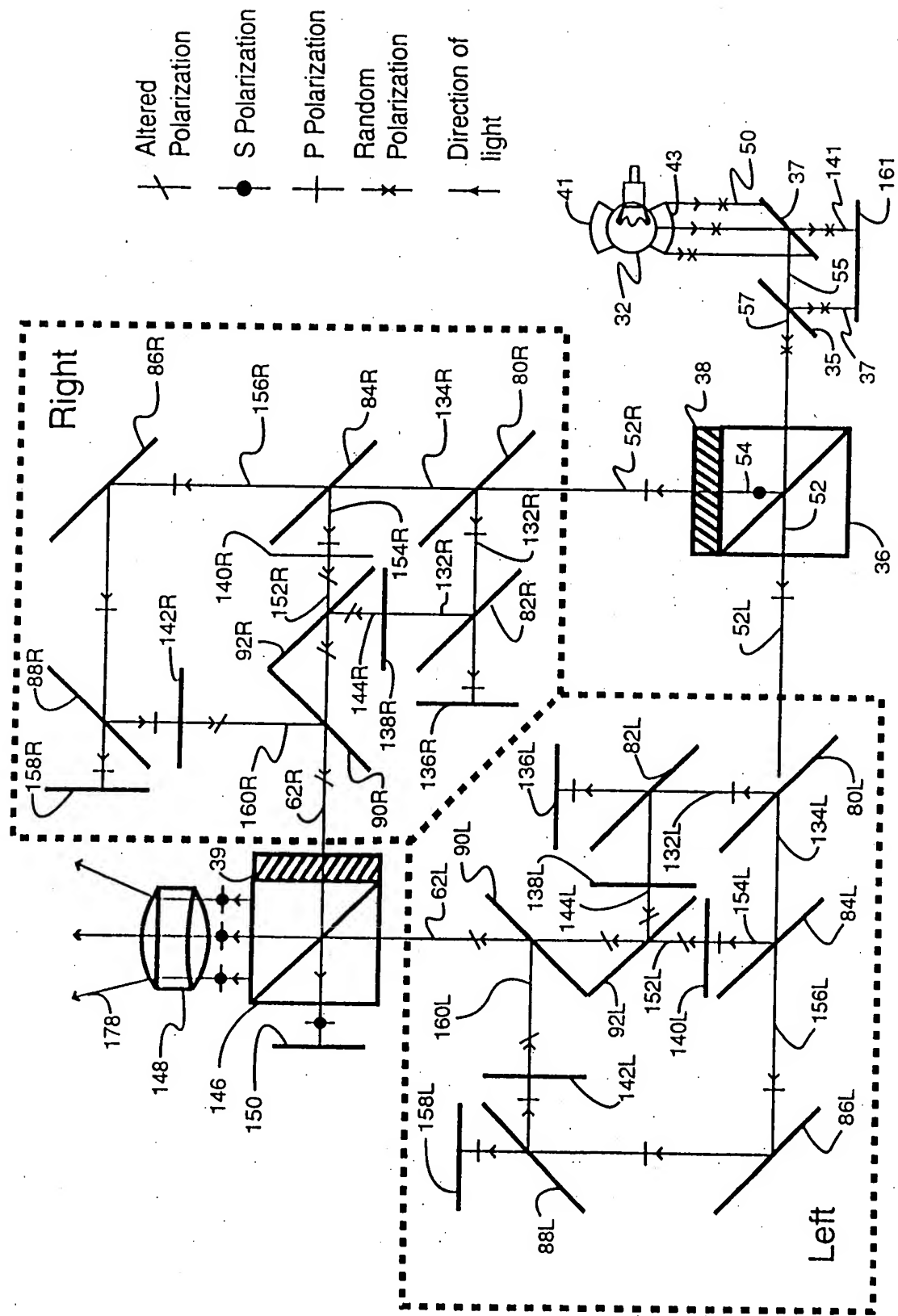


Fig. 20

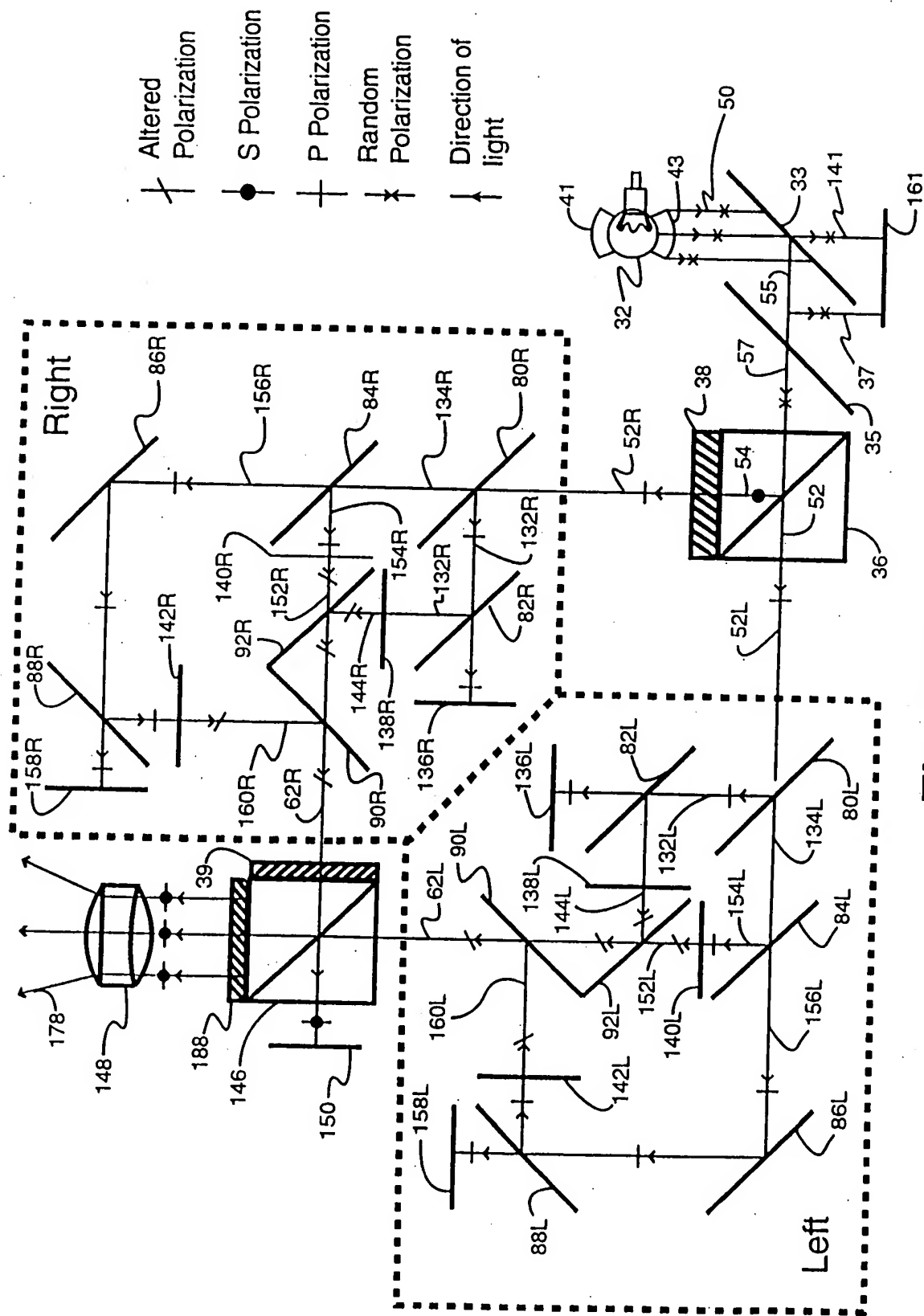


Fig. 20A

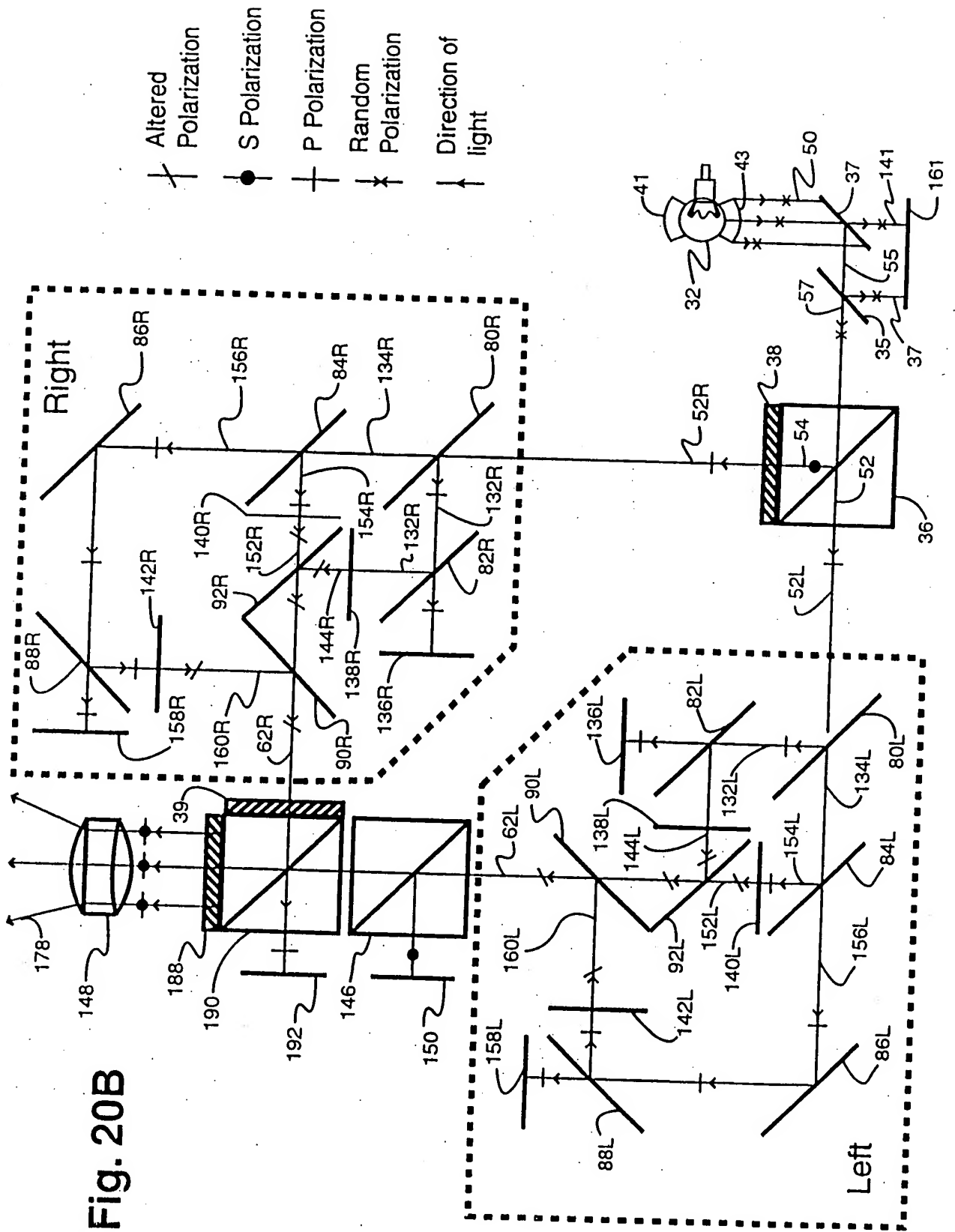
Fig. 20B

Altered Polarization
S Polarization
P Polarization
Random Polarization
Direction of light

Right

Left

Fig. 20B is a schematic diagram of a dual-channel optical system, likely for measuring the optical activity of a sample. The system is divided into two main sections, "Right" and "Left", by a dashed line. The "Right" section contains a series of mirrors (86R, 156R, 84R, 134R, 80R) and beam splitters (142R, 152R, 154R, 132R, 82R) that direct light through a sample (52) and a detector (54). The "Left" section contains a series of mirrors (86L, 156L, 84L, 134L, 80L) and beam splitters (142L, 152L, 154L, 132L, 82L) that direct light through a sample (52) and a detector (54). A legend at the top defines the symbols: a diagonal line for "Altered Polarization", a dot for "S Polarization", a cross for "P Polarization", a cross with a dot for "Random Polarization", and an arrow for "Direction of light".



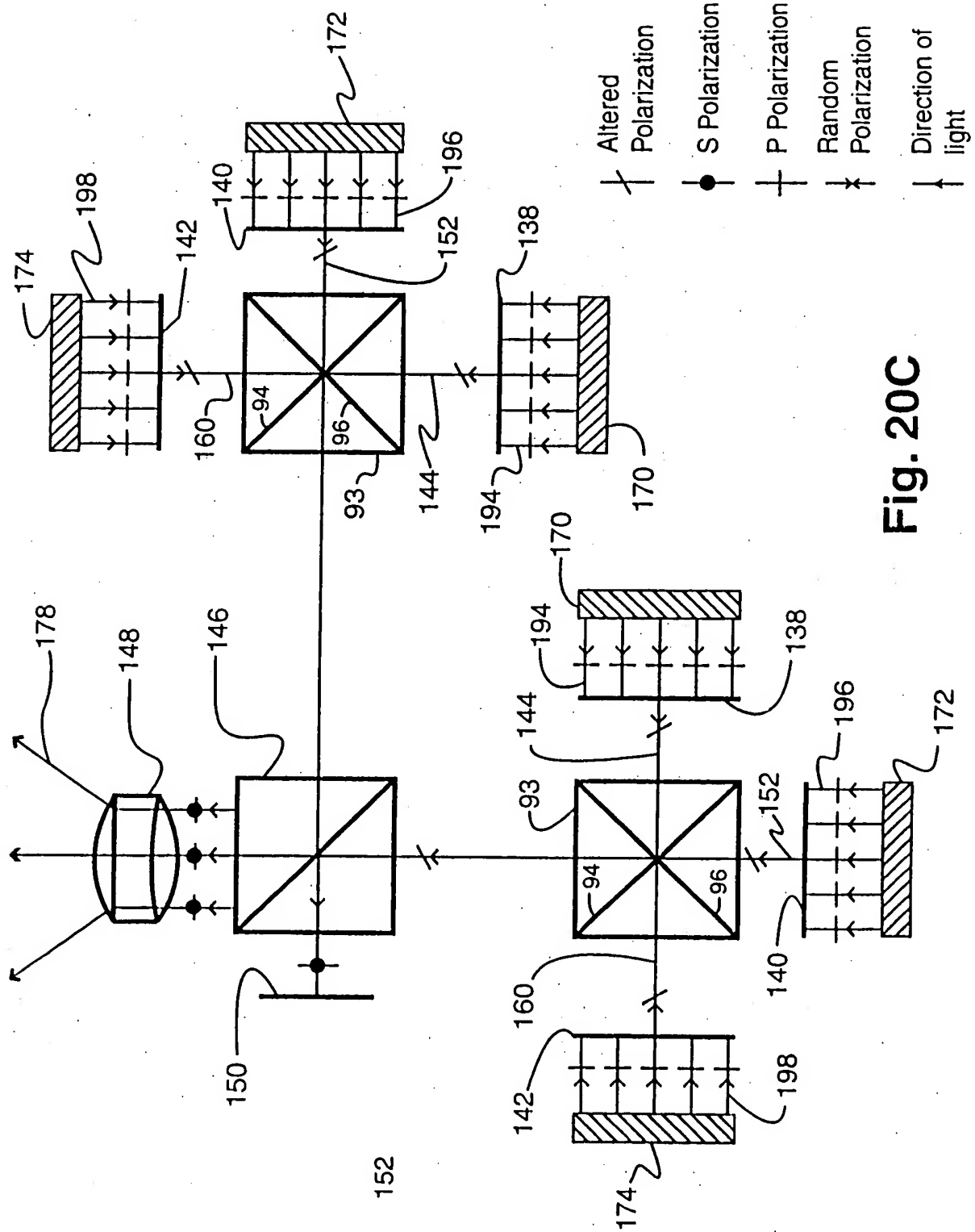


Fig. 20C

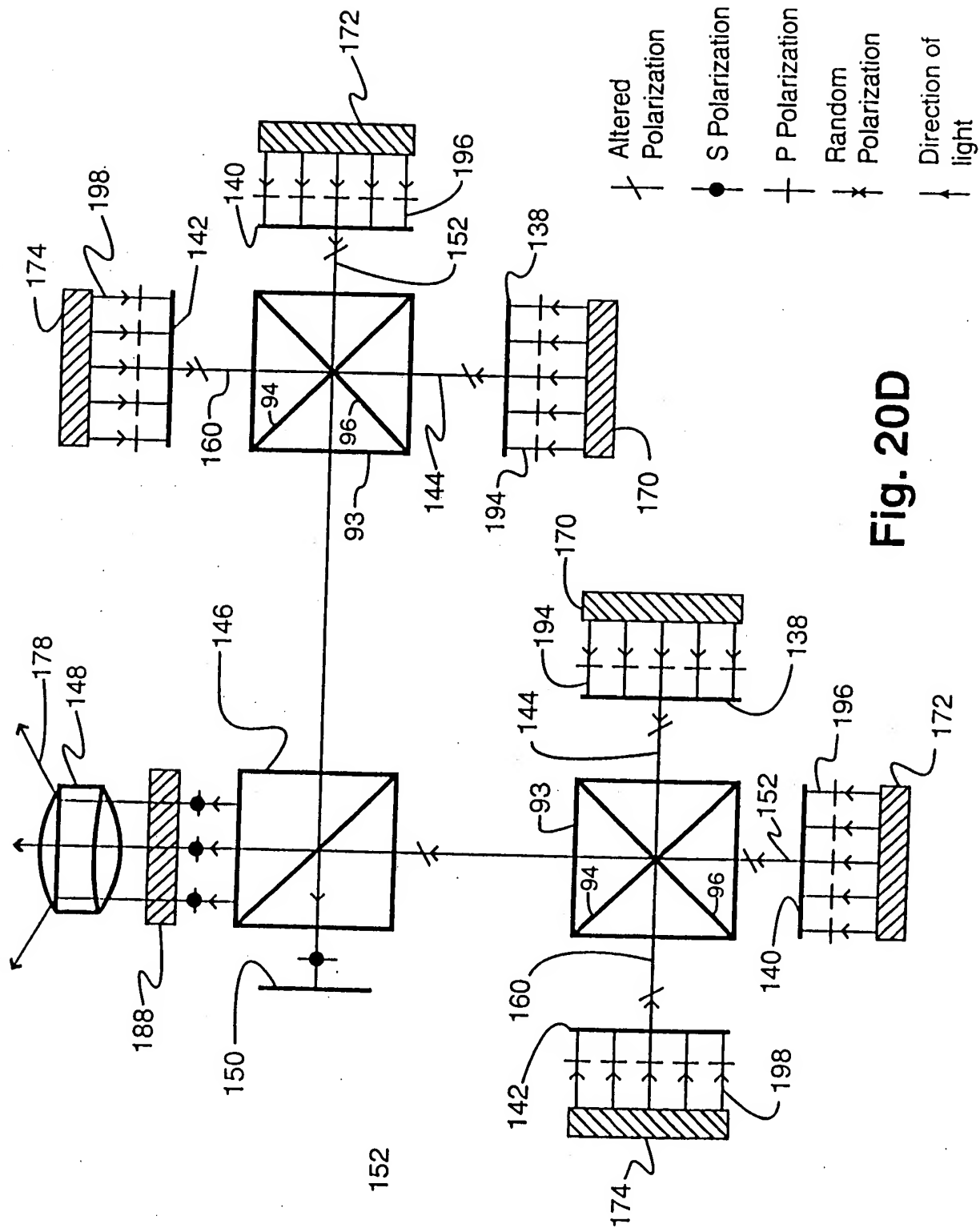


Fig. 20D

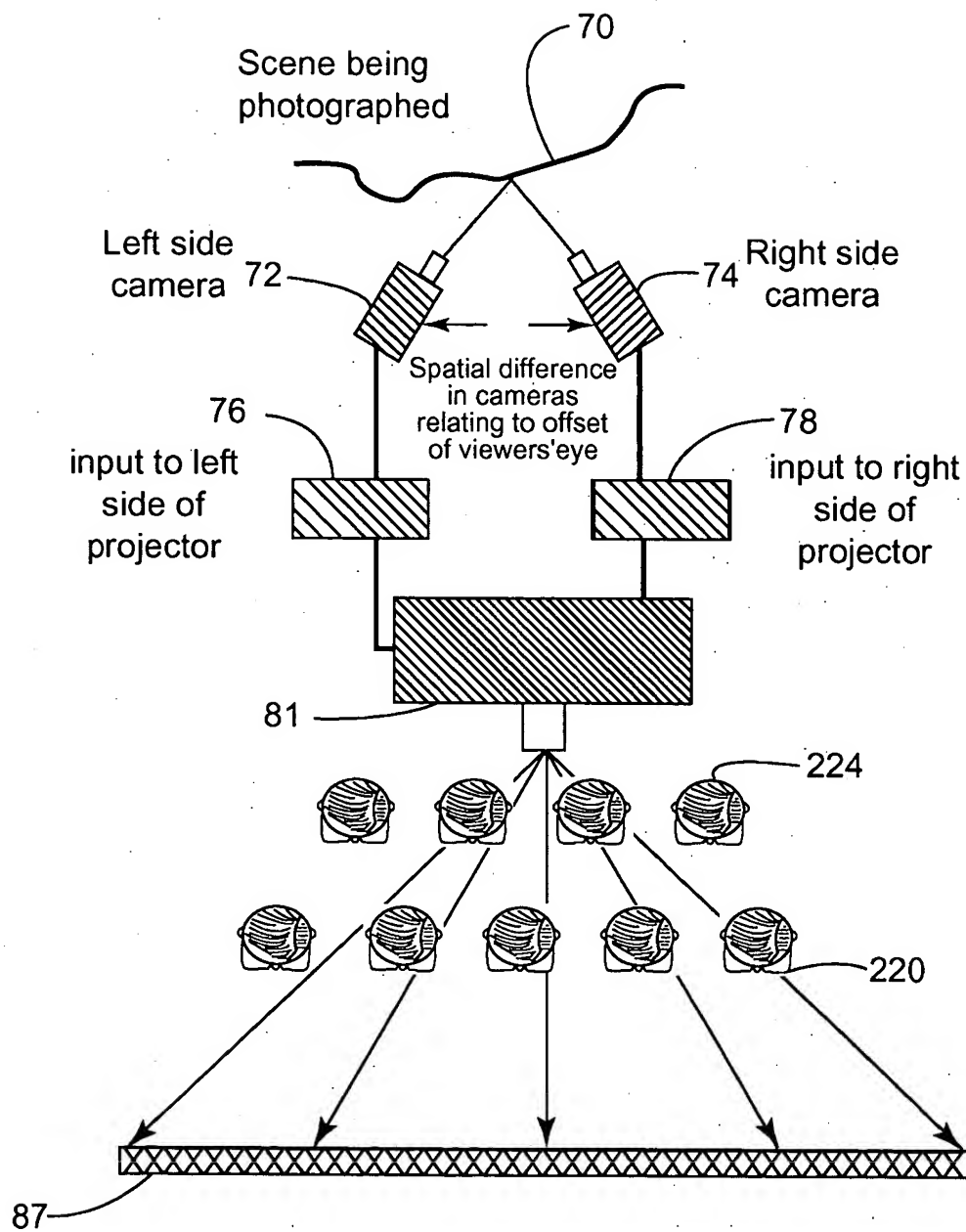


Fig. 21

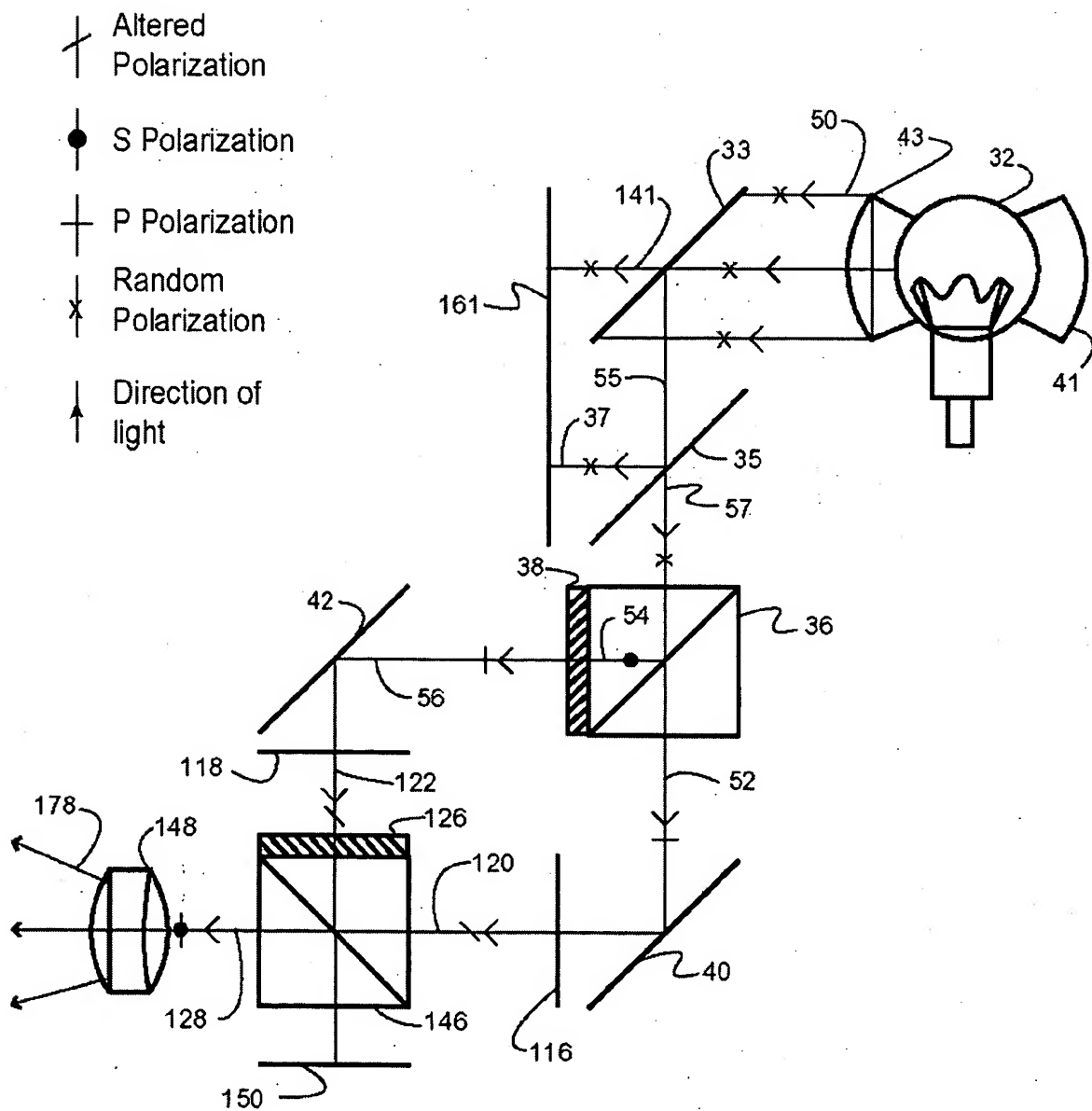


Fig. 22

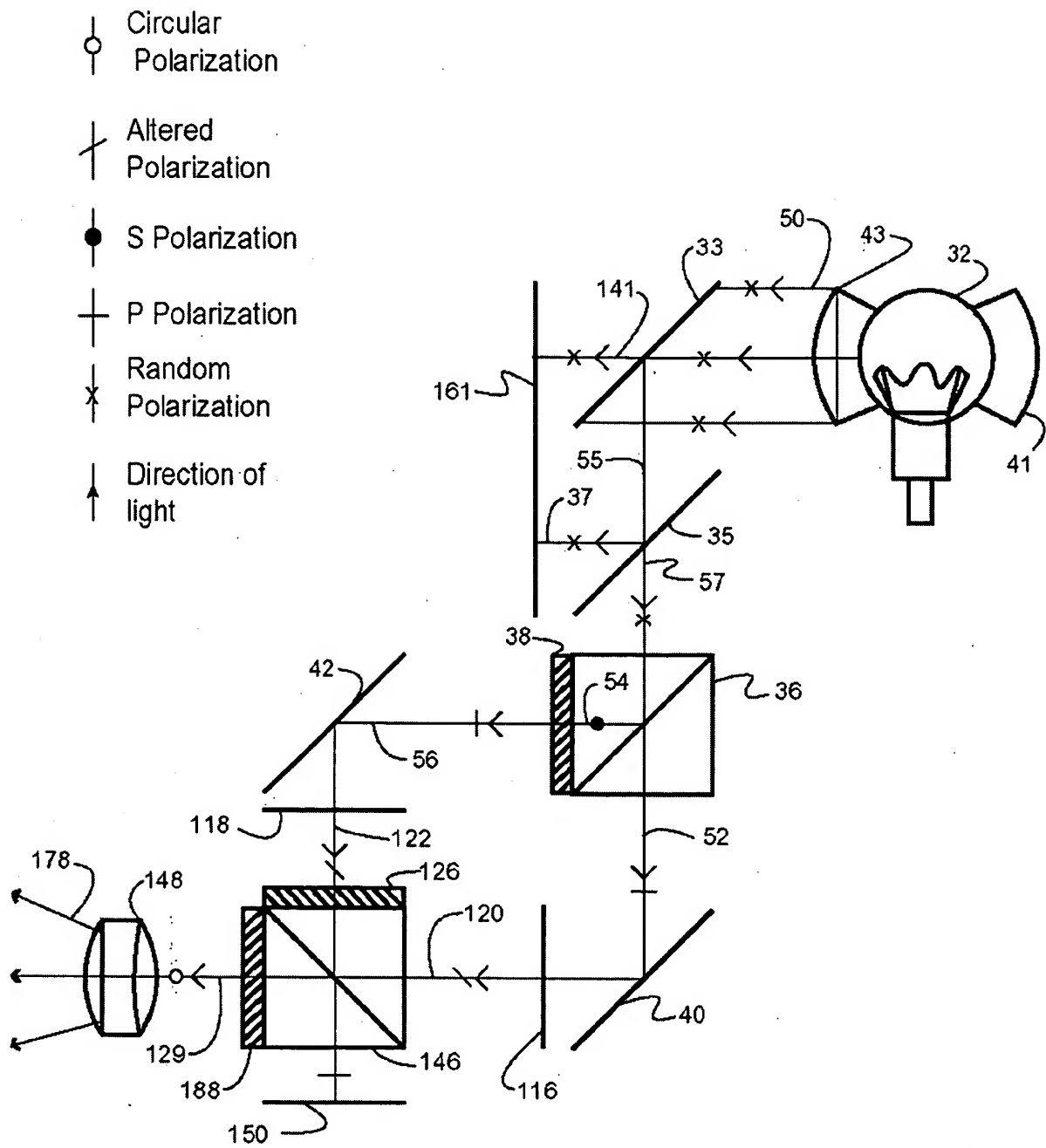


Fig. 22A

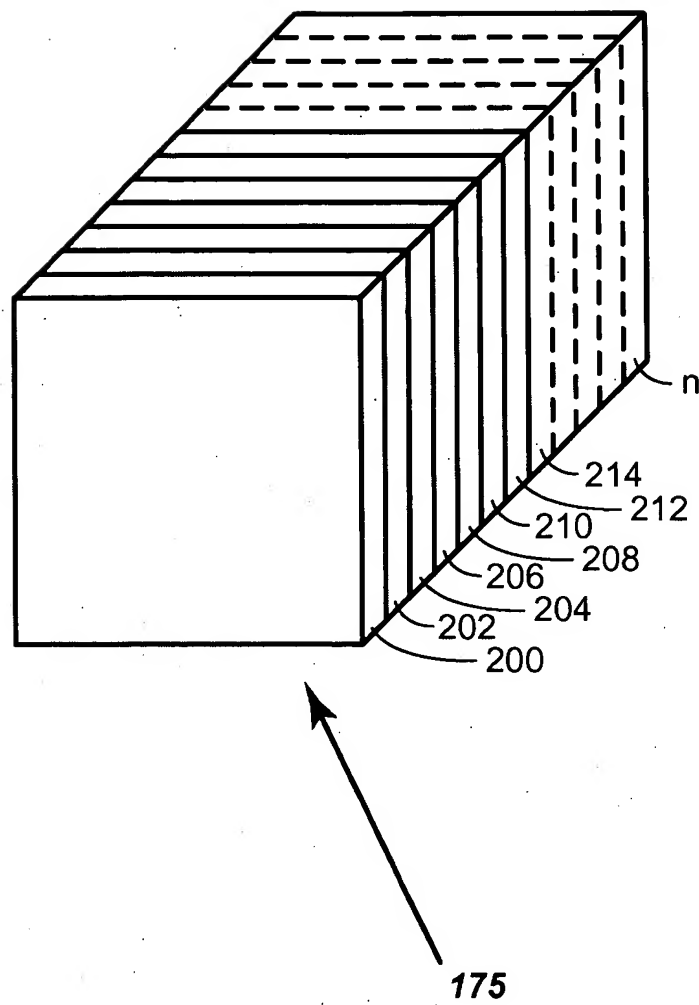


Fig. 23

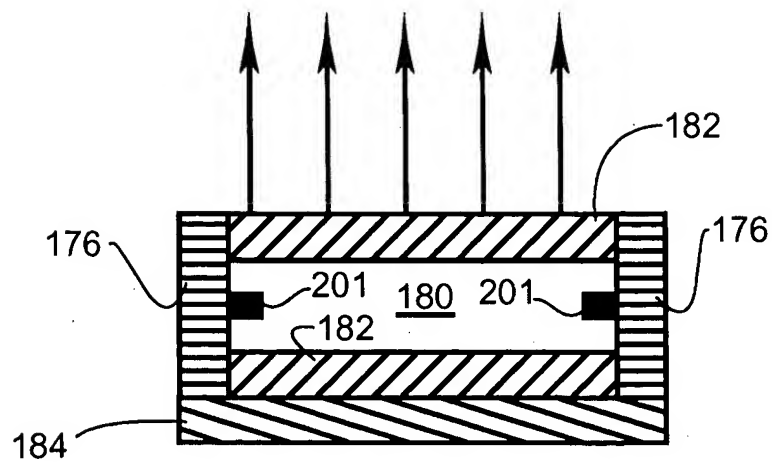


Fig. 24

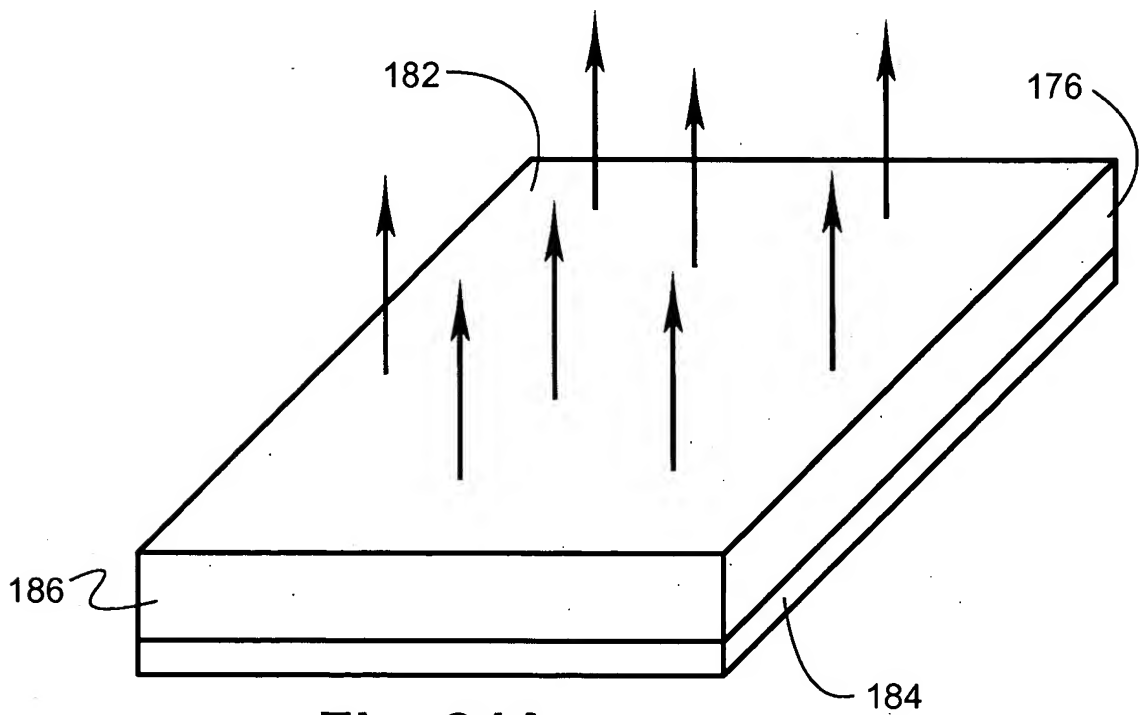


Fig. 24A

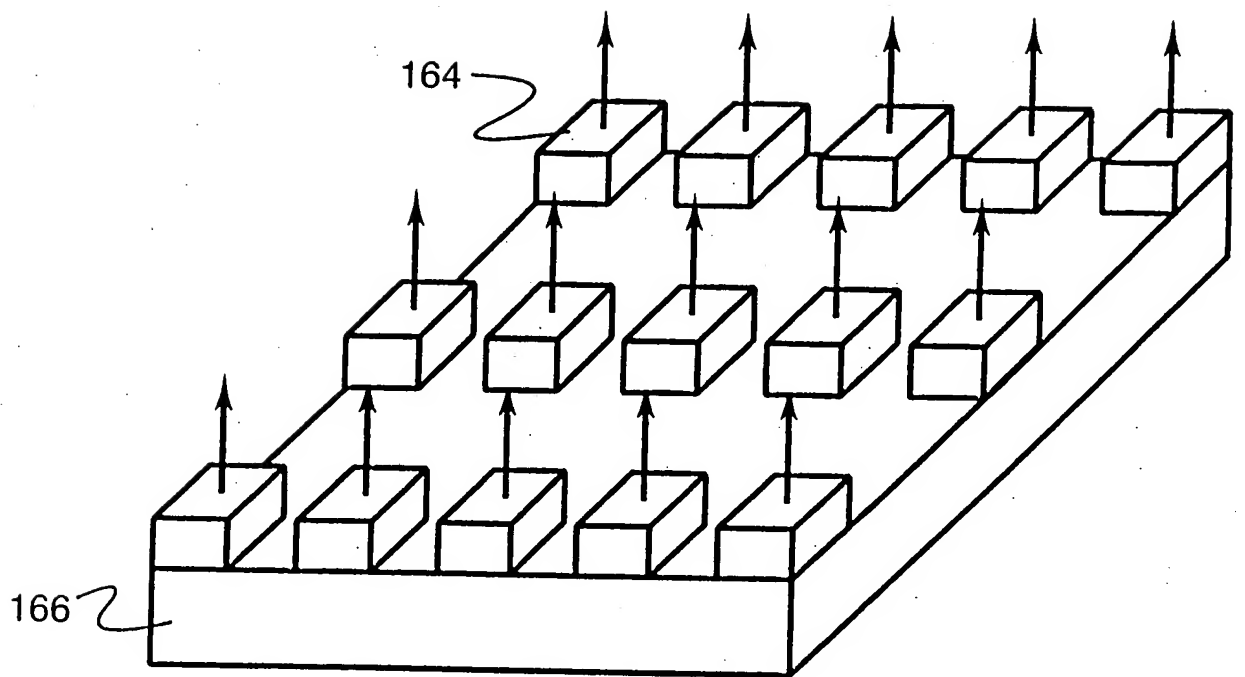


Fig. 25

PART NO.	FIG NO.	TYPE OF MIRROR	SYSTEM USEAGE	>NM TRANS-MISSION	<NM TRANS-MISSION	>NM REFLEC-TION	<NM REFLEC-TION
33	12	CUTOFF	IR FILTER	700			700
35		CUTOFF	UV FILTER	430			430
40		BROADBAND	MAIN BEAM REFLECTOR			400	
42		BROADBAND	MAIN BEAM REFLECTOR			400	
44		BROADBAND	MAIN BEAM REFLECTOR			400	
46		BROADBAND	MAIN BEAM REFLECTOR			400	
80	14	BANDPASS	RED SPLITTER		585	595	
84	18	BANDPASS	GREEN SPLITTER		490	500	
86	15	CUTOFF	BLUE REFLECTOR	495			490
82	14	BANDPASS	RED REFLECTOR--TUNER		590	605	
92	16	BANDPASS	RED-GREEN COMBINER		585	615	
90	17	CUTOFF	RED -GREEN/BLUE COMBINER	525			500
88	15	CUTOFF	BLUE REFLECTOR--TUNER	490			485

Fig. 26

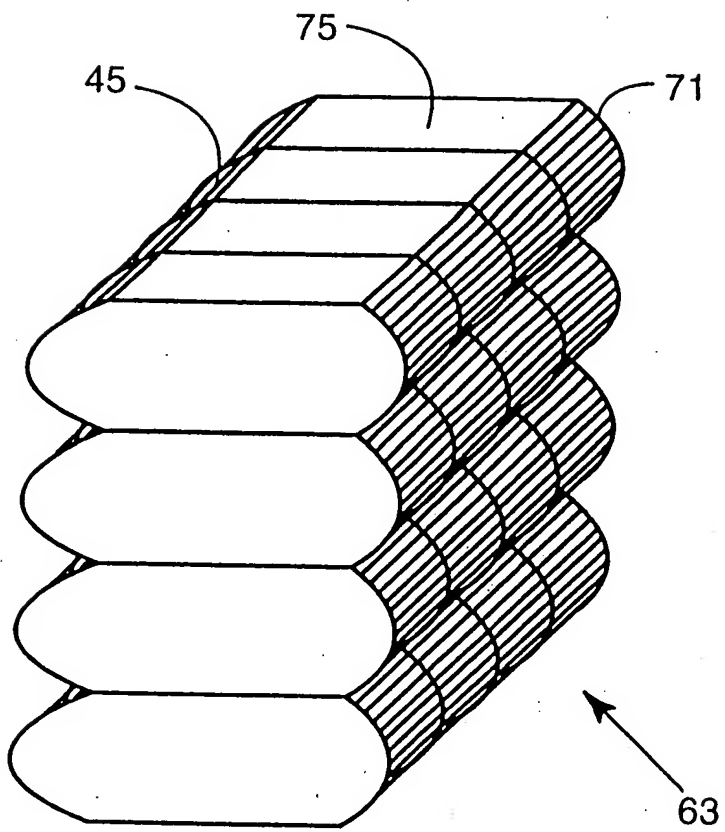


Fig. 27

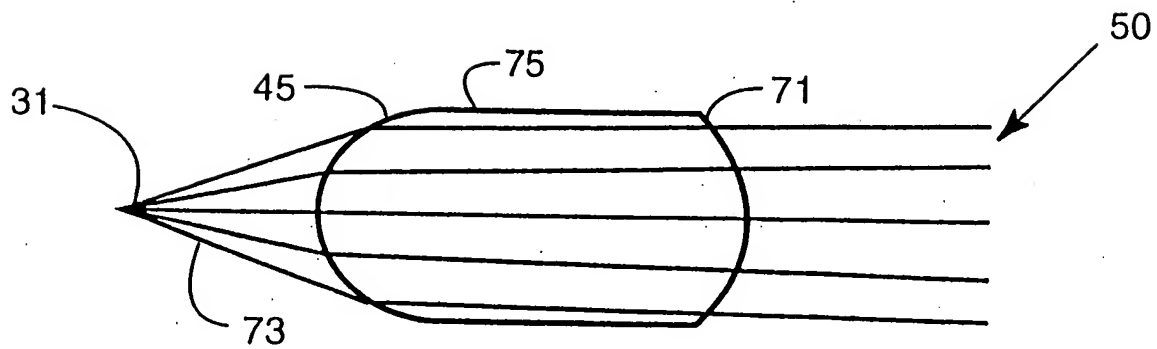


Fig. 27A

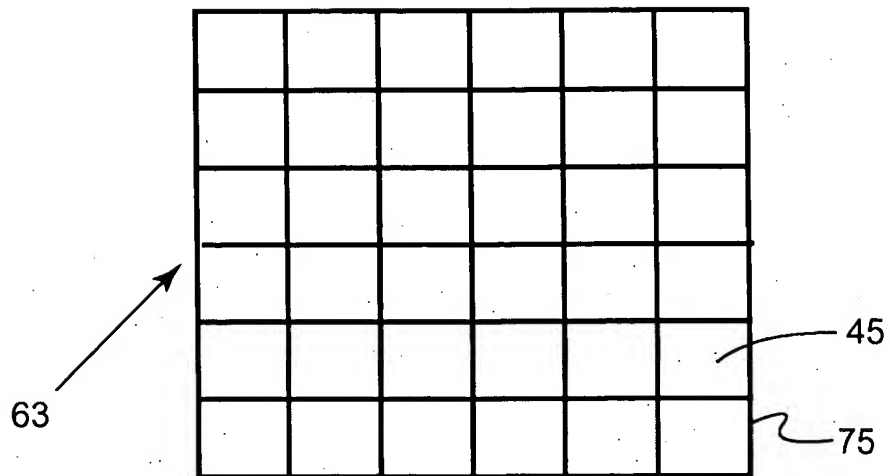


Fig. 27B

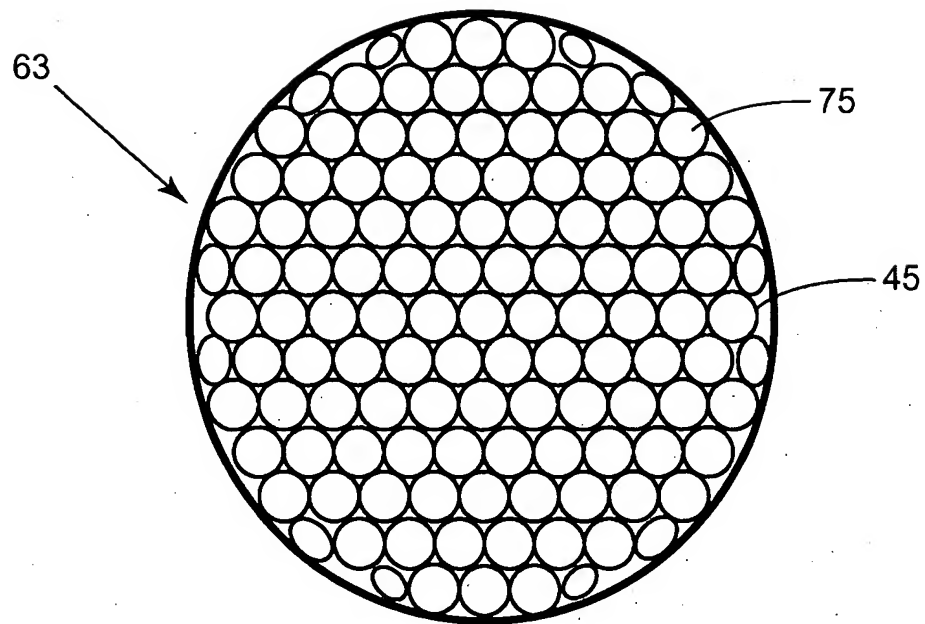


Fig. 27C

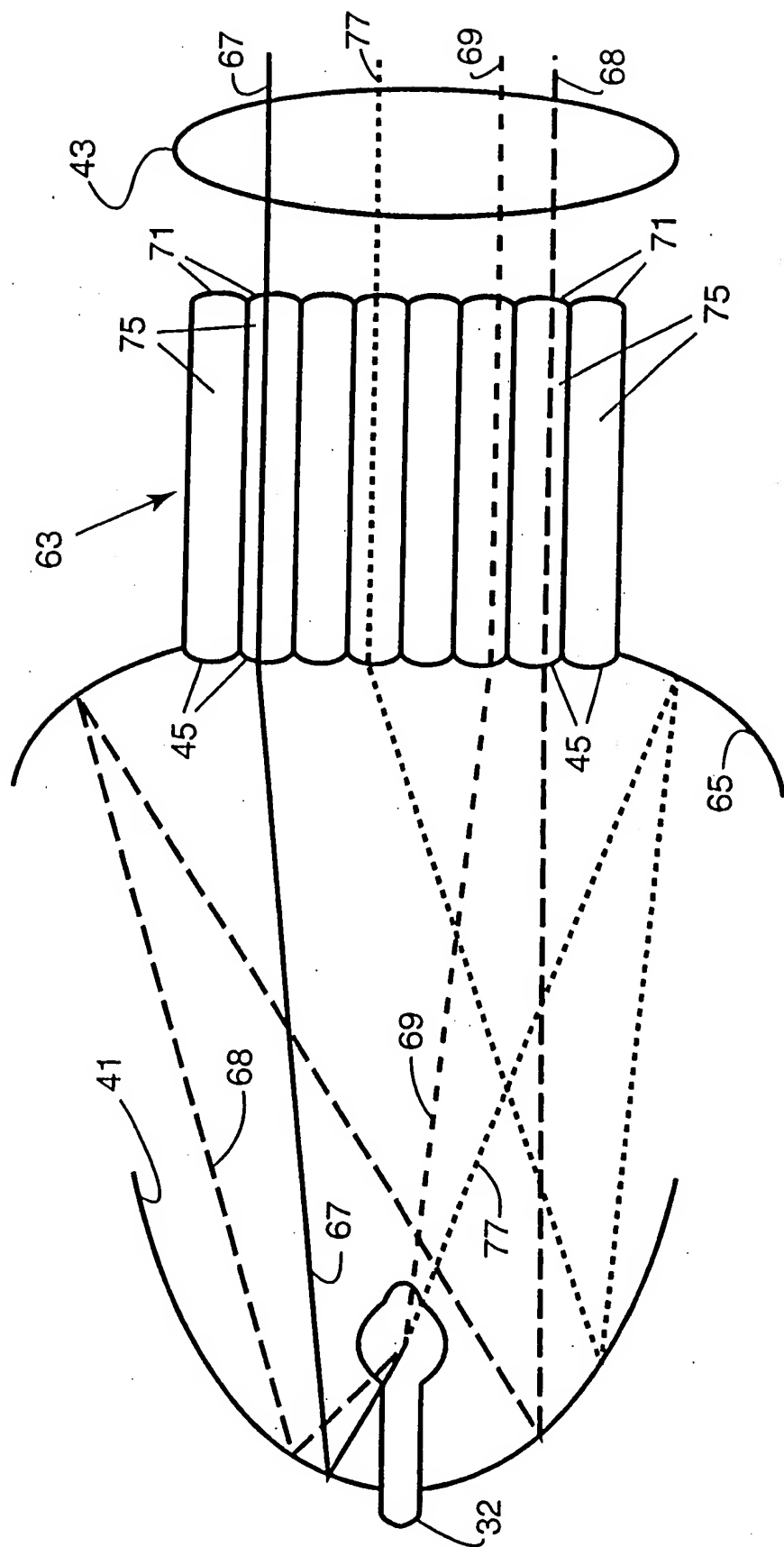


Fig. 28